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A Journal of Secondary Education

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ISSUED MONTHLY

UNDER THE AUSPICES OF THE

ASSOCIATED ACADEMIC PRINCIPALS

OF THE STATE OF NEW YORK

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VOLUME V

FEBRUARY, 1890—JANUARY, 1891

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# THE ACADEMY:

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## *A JOURNAL OF SECONDARY EDUCATION*

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DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND  
ACADEMIC DEPARTMENTS

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VOL. V

FEBRUARY 1890

NO. 1

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*OFFICIAL REPORT OF THE FIFTH HOLIDAY CON-  
FERENCE OF THE ASSOCIATED ACADEMIC  
PRINCIPALS OF THE STATE OF NEW YORK,  
AT SYRACUSE, DECEMBER 26 AND 27, 1889.*

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THURSDAY AFTERNOON.

The Conference assembled at the Leland Hotel at 2 P. M., Pres. C. T. R. Smith, of Lansingburgh Academy, in the chair.

Principal Taylor, of Canandaigua, made a verbal report as a committee of one appointed last year to consider the question of a new register for "Union Schools." He recommended a conference of those interested. The report was accepted.

The Chairman of the Executive Committee reported the following order of business :

The appointment of committees on nominations and resolutions by the Chair ;

The report of the special committee, Professor White, of Cornell, Chairman ;

Discussion of the following subjects : Natural Science in Secondary Schools ; " How to Teach Elementary Physics ; " " Course of Study in Training Classes ; " " Original Work in Geometry."



The Chair appointed as committee upon nominations Principal Farr, of Glens Falls, Principal Clapp, of Fulton, and Principal Allen, of Rochester.

As committee upon resolutions, Principal Graves, of Delhi, Principal Pye, of Geneva, and Principal Callahan, of Penn Yan.

On motion, the annual fee for membership was increased to one dollar.

On motion of Principal Farr, a committee on the "Study of Cæsar" was appointed; Principal Farr, Principal Keyser, and Principal Miner.

#### DISCUSSION ON NATURAL SCIENCE IN SECONDARY SCHOOLS; HOW TO TEACH ELEMENTARY PHYSICS.

*Chairman Smith:* With regard to this matter of Natural Science in Secondary Schools, the Chair may be allowed to state that perhaps the discussion of it at this meeting was suggested by the American Society of Naturalists. It will be remembered, perhaps, that a paper on the subject was read at the Regents' Convocation last summer and discussed. Among others, Professor Clarke, of Williams College, engaged in the discussion. He has brought the matter to the attention of the Secretary of the Board of Regents several times and requested that it might be discussed in our meeting if possible. That it might be presented to you in the light in which it is looked upon by persons interested in scientific instruction in our higher institutions, arrangements had been made that Dr. Thurston, of Cornell University, should open the discussion. Dr. Thurston not being present the discussion is open. Any gentleman who has ideas to communicate or questions to ask on this subject is at liberty to present his views to the Association and have them acted upon.

*Principal Keyser, of Middleburg: Mr. President:* I moved this question at the suggestion of some one else—not because I had some ideas to ventilate upon the subject. The question of Natural Science in Secondary Schools is a question of a great deal of importance to us; and those who have struggled with the question of elementary physics in the Regents' examination know that it is an extremely practical question. My own experience has been that I get the best results in natural science in my own school—which is a secondary school—in those sciences which are observational. I can

do a great deal better work in geology and botany than in any other of the natural sciences. I think the reason is that there is so much material directly at the student's hand, so much that he can do himself, and so little that has to be done for him by the teacher. I am surprised that in the requirements for the new diploma, instead of putting in these natural sciences which we can work at so satisfactorily in secondary schools, they put in chemistry and physics which we can teach much less satisfactorily. The problem of teaching botany and teaching geology it seems to me we can solve very well, but when it comes to the problem of teaching physics, and especially when it comes to the problem of teaching chemistry in the schools, I find that a problem of great difficulty. I try in teaching physics, as far as possible, to have a large amount of experimental work done by the pupils themselves outside of class. I find that in that way I have aroused quite an interest in those branches, or those parts of elementary physics which are simple and which the pupil can handle easily. When it comes to some of the more difficult parts, I find that the teaching of physics is a problem which I have not satisfactorily solved. That is one reason why I wish to hear the subject discussed.

*Principal McKay:* I can tell you how I *teach* physics and chemistry. I have no theories to offer on the subject. I find, however, that my experience does not accord with that of the gentleman who preceded me. I find physics and chemistry the most delightful subjects and the most easily taught and illustrated of any of the sciences. We have laboratories for individual work in both physics and chemistry and they are working very successfully. My plan is to have individual work from every member of the class. We have facilities for twenty to work at one time. I have divided my class into two sections. Everything is presented in the way of experiment, and every principle derived from actual experiment, as far as possible, by the individual members of the class. I believe that this is the proper method, and such a method I think will be found successful, and the student will have no difficulty in passing the Regents' examination. I find my classes in physics and chemistry growing at the expense of my classes in Greek.

I took up the subject of heat before our County Institute, and did a little practical work there, developing some principles which seemed to me in the line of the subject of physical geography, especially of winds and temperature and climate in general. I took a vessel of



sand and a vessel of water and a vessel of mercury of equal weights, but of different amounts, with thermometers in each one, and applied heat to them by means of a blast, developed the idea of specific heat and the capacity of those different subjects for heat. I took a couple of young men from the body of the institute to observe. They took note of the thermometers at the beginning of the experiment and at different times during the period of observation, and drew their conclusions from it;—that different bodies absorb, under the same circumstances, different amounts of heat, thus illustrating the different capacities for heat; the great capacity of water for heat; the less capacity of sand; the less capacity still of mercury. I am sure you can, with very simple apparatus, illustrate those principles and have the students study them for themselves; and it will be thoroughly practicable. Then they will understand, it seems to me, these principles of heat that underlie so much in physical geography, which is otherwise mere memorizing.

*Principal Stowell:* I have seen some of the cleanest experimenting done by Dr. Mc'Kay that was ever done by anybody,—excepting myself, of course, but that makes me qualified to judge. I think that the apparatus used by Dr. Mc'Kay for that hour's work must have cost a dollar; I do not know but seventy-five cents would cover it. I think for those twenty or thirty experiments which underlie the whole of that great line of thought which he has just suggested, in regard to heat and climate, the apparatus must have cost somewhere in the neighborhood of possibly a dollar and a half. Wouldn't that cover it?

*Dr. Mc'Kay:* With the exception of the thermometers.

*Principal Stowell:* It was inexpensive. His laboratory is very small indeed but is very perfect. I will compare his laboratory with those of many of the colleges of New York State. Work can be done there, and is done, just as efficiently as in many of the higher institutions.

I do not know of anything that can be made of greater value along the line of accurate observation and comparison than botany. Of course my chief delight is in comparative anatomy and physiology and physics. But it is hard to do work of that kind. It takes a great deal of special study and great experience to work successfully along that line; and perhaps it would not be desirable in our classes to go into some of those details so fully as might be necessary. But

in botany one can do very excellent work in this way. Plants may be put into the hands of the pupils. I do not know how to go to work any other way. Let them make cross sections of the stems. Give them good sharp pocket knives or little pocket lances which are now accessible to everybody, and let them make those cross sections. By and by they will become so expert as to cut sections as thin as tissue paper. Make every student draw just what he sees. I am not so particular, to start with, whether he sees much there or not. I want him to draw what he sees, and he must learn to see everything that is there, as he will with progress. Then go through the whole of the plant; the leaf, the parts of the flower, sections of the ovary and everything of the kind and make drawings of everything. Then if you take several plants that belong to the same order, it will soon give him the idea of classification. That can be done in every common school and in every academy in the state. The expense of the apparatus required for this finest work is a pocket lance, ninety cents, a jack knife for whatever its costs, a lead pencil, and some brains.

*Chairman Smith:* The Chair would like to give a little of his own experience in this regard. In many of the smaller academies of the state it is found impracticable on account of deficiency of teaching force to do that kind of laboratory work which Dr. McKay has so ably advocated. In order that individual work in laboratories may be successful with students, it seems to be necessary that they should be accompanied by the teacher during their work in the laboratory. Otherwise the time spent there is in many cases found not to be well spent. I have obtained good results by the following plan:—the teacher on one day performs an experiment involving some principles or some applications of principles that have formed a part of the previous lessons. Let the applications be such as not to be immediately obvious without some reflection. He performs the experiment silently in the presence of the class, some simple experiment, requests the pupils to take notes in a book in four columns upon opposite leaves, the left hand column headed “what was used,” the second column headed “what was done,” the third column headed “what happened,” the fourth column headed “what I learned.” In the fourth column the pupil is to describe the work:—“I saw such and such a phenomena; I heard such and such phenomena; I guessed so and so; the teacher said so and so.” This work, carried out with a class of moderate size and with very little apparatus, has



resulted, in my experience, satisfactorily; not as satisfactorily, perhaps, as laboratory work upon a larger scale would have resulted, but, nevertheless, much more satisfactory results were obtained than could have been obtained by mere text book instruction. I offer the suggestion to those who are perhaps too insufficiently provided with teaching force to render a laboratory course possible.

*Principal White, of Cazenovia:* I want to ask a question and see if I cannot provoke somebody to answer it later, if not now. It is in relation to the magnetic needle. Some needles being compared do not give us the same story, do not read alike on the same line. I always thought that the reason for that must be an imperfection in the mechanical structure of the instrument. Last summer I had a letter from Mr. Gurley, of Troy, who manufactures these needles; and he said this, "A few years ago we made an experiment in this way. We had prepared a large number of magnetic needles, all made from the same plate of steel, all made by one man, our best workman, and as nearly alike as possible. They were all tried on the same center and the readings differed," he said, "by from nothing to a whole degree. We consider the difficulty insuperable." Now the question is whether or not this error, if it be an error, or disagreement of the needles, is caused by imperfection in the manufacture, or is it some principle in magnetism that we do not understand?

#### DISCUSSION ON ORIGINAL WORK IN GEOMETRY.

*Principal Capen:* I do not know whether or not I am in a position to make a recommendation to principals of academies. I have been somewhat in doubt with reference to entirely original work in geometry. I am in doubt about it only because it is so difficult. It takes a teacher who will double discount Job for patience. It takes a teacher who knows geometry in order to do it. It takes a teacher who is willing to work in the dark utterly for from eight to ten weeks before he gets any results; that is, I mean, results worth talking about. Teachers usually are not willing to wait for results; they are not willing to wait patiently; they have not the faith to know that the results usually come. I have been through an experience for a series of years where every year meant two years. That is to say I took the class over the same work twice a year. So that I have had an experience in teaching this subject from the standpoint of originality from the beginning, for thirty-one years. I learned to

have patience through the first seven or eight years; I learned to have faith through those years; so that in the later years I knew just what I could do and just exactly how I would come out with a class as a whole. I start in on original work from the beginning. I never barred text books. Text books were always issued to the classes but I simply encouraged the working out of a proposition in geometry on exactly the same basis that they would work out an example in arithmetic without a key. The majority of the various classes worked in this way on a recommendation simply. They let their books alone. They were taught how to go to work at a proposition, how to study, which is a large part of the teacher's work; and by managing this thing carefully to begin with and working up a kind of spirit and a pride in a class, they did this work. They will do it and do it grandly.

I have had some of my students go out and do the same kind of work with the same notes, which consisted simply in a particular order of propositions which I always dictated and never assigned from the books; and the result has been, when they have finished, a knowledge of geometry. And it has been simply because of their plan of studying the subject more than anything else, I think. Quite a large number, but not a majority, of my students follow that plan in teaching. They take a text book, assign the propositions from the text book, but encourage the study of the proposition independently of the book.

There is one very curious fact, and it is a fact, that if you dictate a proposition to students, and they take it down, (it may be the same proposition exactly as the seventh proposition in book three) if you dictate it to them and say, "Now I want you to work at that and see what you can do with it," they go at it with an interest and enthusiasm ten times as great as they will show over it, if you say it is proposition seven, in book three, and assign it in that way. That is my experience.

*Principal McLaughlin:* I never attempted entirely original work in geometry, and wondered if there was any one present who had tried it and could recommend it as safe for the principals of the academies of the state to undertake. On my way here this morning I read in *THE ACADEMY* an account of a book issued by Prof. MacDonald, I believe, in which he advises that entirely original work should be required in our schools; and as I read it I became more and more interested in it. The only satisfactory work that I have



ever accomplished in geometry is by taking the text book and following out the work laid down there, and then giving as many problems bearing on the problem given in the geometry as I could find, allowing that to be the original work. I am satisfied that the work accomplished in doing the original work is much more satisfactory than that which comes from observing simply the methods of demonstration given in the geometry.

*Principal McDonald:* I never saw a book in geometry until I got through with plane and solid geometry; and in teaching I have never used one, except this last term. This work by Prof. MacDonald I have just received and think it is excellent. A point has been raised sometimes that the work could not be covered in the time allotted to it without a text book. I think we can do more work without the book than we can with it; because the pupils will acquire a habit of thinking, they will acquire a habit of doing work, and they can work better after being once started in that way.

*Dr. McKay:* I would like to ask Dr. Capen whether he simply dictates the theorems or whether he has the pupils give the wording of the theorems?

*Principal Capen:* The method has been to dictate the theorem; but the order of the theorems as dictated is not corresponding to the order in any text book. It is an order that I have worked out myself as a result of my teaching. It is a combination of Euclid and modern geometry. I start in at the beginning very much as Euclid starts in. The first proposition is, for instance, to construct an equilateral triangle. And I mix up the theorems and problems, not taking up theorems first and problems afterward, which is entirely wrong from an educational standpoint.

*Principal Lovell:* My mind goes back to the time when I began the study of geometry under Dr. Capen at Cortland, in September, 1875. There was a large class of us who started geometry for the first time. I remember that there was no single member of the class who had ever studied geometry before; and at that Dr. Capen expressed gratification. So far as I was personally concerned I never took a text book on geometry in my hand until we came to solid geometry. That is to say, I went through with the subject of plane geometry, as taught by Dr. Capen, having in my hand as tools to work with definitions dictated by him, six or seven axioms, and four postulates; and

with those postulates, axioms and definitions, with additional definitions given as we met successive books, that class went through the subject of plane geometry. I believe that the majority of the students in that class used no text book whatever, but I know that some students, young ladies especially, did memorize demonstrations out of text books. I speak of that simply as a pedagogical fact.

Then solid geometry came. I know at that time a text book was issued, Loomis's I believe. I know I used to consult that authority and I used to consult Olney and others. And I know we all worked out original demonstrations for propositions in solid geometry. It just comes back to me that one member of the class invented twenty-three different constructions and independent proofs for the old proposition that the square of the hypotenuse of a rightangle triangle is equal to the sum of the squares of the other two sides.

Of course the members of that class were older than the majority of students beginning geometry. I am not clear in my own mind that, with the average students starting geometry, boys of fifteen or sixteen years of age, it would be wise to depend so entirely upon original thought as Dr. Capen's work did.

*Principal Cheney* : I want to ask a question of those gentlemen who have done purely original work in geometry, starting their classes without text books, as to the relative time it took the pupils to master the subject, as compared with their knowledge of the time that it had taken their pupils to master the subject by teaching in the old way.

*Dr. Capen* : We have one year assigned for our work in plane and solid geometry and plane trigonometry and rectangular surveying. I was able to accomplish in one year all of plane geometry, all of solid geometry, plane trigonometry, and about a week to ten days in rectangular surveying. I did not bother my head so much about how much work I accomplished in the first twenty weeks, although ordinarily we accomplished about six books in twenty weeks. We finished plane geometry and I am not sure but what we finished the geometry of planes. We sometimes did that at least. Then the second term we finished solid geometry, having about eight weeks left for trigonometry and surveying, all of which can be done, and done nicely, in eight weeks, and taught in the same way.

I find in teaching in this way, as Professor Lovell has said, it is necessary to go slowly at first. I think we went over only fifteen



propositions in five weeks. But the strength which they developed in going slowly at first counted later on, so that we could go more rapidly and go more intelligently.

*Dr. Clarke, of Canandaigua:* It was always my method to make pupils put everything upon the board, so that they could see what they were talking about ; and whenever they used a term which involved a construction, they were to make the construction. I very much doubt the propriety of this method of teaching geometry that has been alluded to here. I do not believe there is time enough for it. There is not one of us here who did not study geometry four or five or six years before he knew enough to do much in original geometry. After a while, after we became perfectly familiar with the subject, so the subject was as familiar to us as A, B, C, we began to see how we could make original plans and constructions. Not half of the men or a quarter of the men are inventors. It takes as much invention sometimes to produce a figure to prove the truth as it does to invent a machine. If scholars have got to be kept upon that subject of invention, trying to make a construction by which they can prove something, it will take too much time. It seems to me that, if they are ever going to teach geometry, it is a thing which would come along as a matter of course. I cannot see that it is really the object of teaching to make all scholars original workers. We have not the time for it. We do not expect to make every scholar an analytical chemist. It takes a man a lifetime to become an original investigator.

*Principal Allen:* I went to the Rochester Free Academy fully imbued with the principle of original work in geometry and I suggested to our leading teacher that this line of work be followed out. We have been working at it for some time. We find that it is necessary to give a scholar something of the book ; not putting the book in the scholar's hands, but following the order of the book for say the first two weeks ; and then the second term and subsequent work we find that we can do better in original work.

*Principal Sheldon:* It has not been my province to teach geometry. It has been our custom always, however, from the organization of our school, to teach geometry without a book. I can say that so far as results are concerned we have found them satisfactory. I have never yet heard complaint on the part of any pupil that he was not able to do original work. I have yet to learn that

any difficulty lies in the way. Our theory is that pupils get strength to do by doing and that you can hardly expect to develop original power, power to think and to do, unless you throw responsibility upon the pupils. I cannot see why we should have the demonstrations put into the book in geometry any more than in arithmetic. I think we should all condemn any arithmetic that would do that sort of thing. We would not be willing to put it into the hands of our pupils. I have yet to see why it is any more necessary to use a book of directions to the pupils, what to do and how to do it, in geometry than in any other study. We have a number of pupils, I see, sitting about here who have had this course themselves, and if there is any objection to it they are able to make it. I have the same to say that Dr. Capen said in regard to time. We covered the same work in the same time.

*Principal Wright:* My wife is a Normal School graduate of Oswego. My preceptress is a graduate of the Cortland Normal School, and took this subject of geometry under Professor Capen. She was in the school two years before I went there and, when I went there, had a class in geometry. Her method was exactly Professor Capen's method, because she had all Professor Capen's notes. Now it resulted just this way. The first year the class did splendid work but they put every bit of it down in books. The next year the class did pretty fairly but they copied a good deal of the previous class's book. The third year they were all books and nothing else. Now I claim that, in order to teach this original work, you must have an original teacher and you must have a new book every year. Otherwise you are teaching nothing but books after the first year or two, and I do not see any necessity of compiling a book every year. I think that with a good text book (as good a book as a half dozen we now have) supplemented by original work and changing text books about once in two years, we can get good results.

After trying, for three years, this original system,—which I supposed was the do-all and the best of all,—I found that I could cover in two terms's work the same work that I took a year for by the original method; and I think my pupils taught by the combination method will originate just as fast as those who had originality for a year. I would say, then, that this talk about original work amounts to very little after the first class or two upon any method I have yet seen.



*Principal Scudder*: About seven years ago it was my fortune to go into the Yonkers high school for a few minutes, and there I saw for the first time "Spencer's Inventional Geometry" in operation. I there noticed that the students were very much interested in their geometry work, which was something that I had not often observed; and what is more, they easily performed processes which to me seemed very complicated for scholars of their age. I was inspired by what I saw to introduce this work on Inventional Geometry in whatever schools I have taught since, and the results have been very satisfactory in every way. The book is a small one. It is published by D. Appleton & Co., and costs only thirty-five or forty cents. The work has been introduced recently into the Rome Academy. We have one student who has been studying the subject of geometry for two terms, and he was, we considered, a hopeless case. He immediately grew fond of the study. He seemed to take an interest in it that he never had before. By taking up inventional geometry he was enabled to better understand plane and solid geometry in the text book which I used there. After having seen where it has been of such vast benefit, I have been convinced that there is no better way to wake up the minds of pupils and to get them thoroughly interested in the subject of geometry than by introducing this single work into our schools. I think it can be introduced as early as the age of ten or eleven years. I have seen one who recommended it as early as the age of eight.

*Principal Bunten, of Rondout*: Is the subject of teaching the study of geometry in our schools simply to cultivate the power of invention, or to cultivate the power of reasoning pure and simple, to enable our scholars to follow a distinct demonstration in a clear, logical manner to a correct conclusion? I do not know how this idea of original work would operate in the minds of scholars in that respect; whether it will lead them to follow out a line of argument clearly, distinctly, step by step, until they arrived at the proper and just conclusion of the whole matter; whether it will help them in power of reasoning, or whether it will simply cultivate the power of invention. I believe we should have some original work. I have taught geometry for many years and have always required as much original work as I could well secure, but have always used a text-book and have always required the scholars to follow out the demonstrations in a clear, logical manner. It seems to me the better way.

Perhaps I have been working upon the wrong line. If so I should like information in that respect.

*Principal Hoose:* I would like to ask, of those who teach geometry as original work from the beginning, if the teacher is called upon at the beginning of the year to do much in the way of explaining to the pupils?

*Principal Capen:* Yes, for two or three propositions.

*Principal Hoose:* I had this experience in teaching geometry. I took scholars from ten to twelve years old. I started them at the beginning of the year in geometry, proceeding on the theory that they would be able to start from the beginning, to help themselves through difficulties. So the teacher was instructed not to give them any indication of how to go to work to demonstrate the propositions. It was demonstration, thorough demonstration, and not simply form work. We took to start with a simple proposition, something that they could work out for themselves. The teacher did not suggest to them what to do. I suppose those children were at work at that and kept their interest up for a week trying to do something. The first half of the second week they began to loose interest and at the end of the second week were quite discouraged. Now do not say that I was foolish. I was not. I wanted to see what children could do. I wanted to study them. I didn't care, for the sake of the experiment, whether they learned geometry or not. I cared to see what they would do. At the end of that time I became convinced, as did the teacher also, that they must have help in the form of demonstration. So the teacher went to the board and worked out a very simple demonstration, and I think she took with her a paper cut in form, the angles made and worked out, so that it was a very simple thing; went over it with the pupils, who followed it carefully. Then she was instructed to see that each child in the class mastered that demonstration. I started out to find when the childred would begin to show a subjective mastery of that. After spending some time upon this we took the next one. Then we reviewed this one. Call it, if you please, a drudge drill or what you will. It might have been the third or fourth day on this kind of work, when one of the pupils going to the board—a boy I think—put down the propositions alone, but did not keep them in the order in which they had been taught. That was what I was looking for;



but he had it correct. After a little while there began to appear indications of mastery.

REPORT OF THE COMMITTEE ON THE NEW DIPLOMA.

*To the Associated Principals:*

Your Committee appointed last year respectfully submit the following report.

There was prepared and mailed to the academies and colleges of the University, the following circular letter:

At the last Holiday Conference of the Associated Academic Principals of the State of New York, the undersigned were appointed a committee and charged with three distinct functions:

To devise a new diploma to be issued by the "University of the State of New York," that should give due recognition to the Modern Languages as preparatory subjects;

To inquire from the Academies whether they can give the course of instruction leading to the new diploma; and

To inquire from Colleges and Universities whether they will accept these diplomas for admission to their respective courses.

This action of the Principals is but one expression of the feeling now so widespread and so thoroughly grounded, that a relation truly organic must be established and maintained between the secondary and the higher institutions of learning as a condition precedent to the best success of either. President Patton, of Princeton, voiced this sentiment at Brooklyn, last July, when he said that there must be better "articulation" between the fitting schools and the colleges; and Professor Seymour, of Yale University, discussing the same relation in the current ACADEMY, says that no problem is more important.

It will be seen that for the new diploma proposed, the only additions to the Academy curriculum necessary are: (1) The subjects of Spherical Geometry and Trigonometry; and (2) an additional year of either French or German.

The committee would respectfully beg for an early answer to the inquiry whether your institution could prepare students to take such a diploma, or would accept the holder thereof without further examination in the subjects which it covers. Please answer before December 10, if possible.

Officers of Colleges and Universities, replying, are requested to direct their answers to Prof. White; officers of Academies, to Principal Lovell. The replies will be carefully collated; and a report upon them will be made at the coming Holiday Conference.

Very truly yours,

ALBERT B. WATKINS,

Assistant Secretary of the University, Albany.

HORATIO S. WHITE,

Dean of the Faculty, Cornell University.

HERBERT M. LOVELL,

Principal of the Free Academy, Elmira.

Subjects covered by the three Diplomas:

	ENGLISH.	MODERN. (PROPOSED.)	CLASSICAL.
These subjects constitute the requirements for the "Preliminary Certificate," admitting to Academies.	Arithmetic. Geography. Grammar. Reading. Spelling.	Arithmetic. Geography. Grammar. Reading. Spelling.	Arithmetic. Geography. Grammar. Reading. Spelling.
These are the requirements for a second credential known as the "Academic Certificate." It is of value mainly to those students who never go on to graduation from the Academy, serving for them as a certificate of progress.	Algebra (thro' quad.) American History. Physiology. Physical Geography. Rhetoric.	Algebra (thro' quad.) American History. Physiology. French grammar and trans. (2 years). or German grammar and trans. (2 yrs.)	Algebra, (through quad.) American History. Cæsar, B. G., 1-4.
The final requirements for the three Academic Diplomas, respectively, are here shown. The possession of any one of them is a guarantee that the holder has passed in each of the subjects written upon its face, as well as in the subjects necessary to secure the Preliminary and Academic Certificates, an examination set and read by State examiners, not by local instructors. It is believed that these examinations are or can be made sufficiently scholarly to satisfy the entrance requirements of any American College.	Plane Geometry and any four from GROUP I. Book-keeping. Civil Government. English Literature. History of England. History of Greece. History of Rome. Mental Philosophy. Moral Philosophy. Political Economy. PLUS any four from GROUP II. Algebra (higher). Astronomy. Botany. Chemistry. Drawing. Geology. Physics (elementary). Physics (advanced). Trigonometry. (plane & spherical). Solid Geometry (including spherical). Zoology.	Plane Geometry and three of these Four Groups: Algebra (higher). Solid Geometry, (including spherical). Trigonometry (plane and spherical). Physics (elementary). Chemistry. Botany.  French Classical Authors, 1 year.  German Classical Authors, 1 year.	Plane Geometry and  Sallust's Catiline. Virgil's Æneid, books 1-6. Virgil's Eclogues. Cicero, six orations. Latin Composition. Xenophon's Anab., books 1-3. Homer's Iliad, books 1-3. Greek Composition.  For the English Diploma, substitutions are allowed as follows:  Cæsar, for 3 sub. Xenophon, " 3 " Æneid, " 2 " French, " 2 " German, " 2 " Sallust, " 2 " Eclogues, " 1 " Cicero, " 1 " Homer. " 1 "



The replies received from the academies are summarized in the following tabulation:

No. of Circulars mailed to Secondary Schools .. . . . . .	306
“ “ Principals from whom replies were not received.....	136
“ “ “ “ “ “ were received .....	170
	—306
No. of Principals replying with a <i>negative</i> , without remark.....	26
“ “ “ “ “ an <i>affirmative</i> , “ “ .....	58
	—84
“ “ “ “ “ “ with comment.....	72
“ “ “ “ “ a <i>negative</i> , “ “ .....	14
	—86—170
Circulars mailed to colleges.....	40
Will accept the Diploma.....	11
Friendly to the movement.....	3
All others.....	4
Total number of replies received.....	18

In consequence of the correspondence, to the four groups of the third section of the proposed diploma a fifth has been added, viz.: “German or French Grammar, and translation *as above*.” This will make the modern diploma more flexible, without affecting its value.

In order to provide for the wants of those students who desire to combine Latin with a modern language, and to meet the entrance requirements of “Latin-Scientific” or “Philosophical” courses at colleges in the same manner in which the entrance requirements for classical, scientific, or technical courses are met by the other diplomas, a fourth diploma is also recommended, based upon a substitution of a modern language for Greek in the Classical Diploma.

Respectfully submitted,

ALBERT B. WATKINS,  
H. S. WHITE,  
H. M. LOVELL.

Principal Cheney moved that the report of the committee, including the recommendations of Principal Lovell, be adopted.

*Principal Verrill:* Some of these colleges mentioned do not admit students unless they have the requirements in Greek. Are we to understand that they would accept a Regents’ certificate or diploma for German in the place of Greek?

*Professor White:* I would say, in reply to the question, that those colleges would simply accept students offering these diplomas in

those subjects which the diploma covered that were included in their entrance examinations. In a classical course the man presenting it would naturally offer a classical diploma. It would be for his benefit and that of the institution to accept his diploma for what it covered, and then he prepares himself in what is left. That is the way we understood the answers from such institutions. One or two institutions proposed to establish, or were in favor of establishing, courses which would more nearly hit this diploma, but no action had been taken. It was merely the expression of a desire.

*Principal Curtiss:* If I recollect aright, a year or two ago the trustees at Cornell said they would not accept a person in solid geometry without an examination. Do I understand they waive that now?

*Professor White:* I would say in reply to that, that no pass-cards are accepted in Cornell University. The only paper accepted is the full diploma. But if a student offers pass-cards in addition to the diploma, covering further examinations, those are accepted, covering all the subjects in which the Regents' make examinations, including solid geometry and French and German, if the Department of the University concerned expresses its approval.

I would like to say just here in regard to this matter of diplomas, that it is a matter of great interest at Cornell, because last year one hundred students presented Regents' diplomas in our Freshman Class, and this year over one hundred and twenty-five presented Regents' diplomas and were admitted on them.

*Chairman Smith:* The Chair would like to inquire whether there are any statistics showing whether those students did satisfactory work in the university?

*Professor White:* It is perhaps a little early to make an analysis. But at the end of this year a very careful table was drawn up, covering some three hundred and sixty cases, I think, of students admitted to the university as Freshmen last year; and those were classified as admitted on Regents' diplomas, wholly or partly by examination, wholly or partly by certificate, and entirely by examination. Those admitted on Regents' diplomas stood at the head of the list for good work during the year. Those admitted entirely on examinations stood at the foot of the list. I think that if this means anything it means that the men who have Regents' certificates come with a sur-



plus of preparation and have more maturity. Those who enter entirely on examinations, from no fault of their own, come with insufficient preparation, have no surplus, and less maturity; and so, through no fault of their own, they do not do as well.

*Principal Emerson:* I hope I am not out of order, but I would like, while we are discussing this question, to have somebody explain, if possible, why it is considered perfectly just and fair that a student who takes three years in Latin, and thereby gets six credits, can substitute those six credits at his pleasure; but if he takes three years in German and gets only four credits, he is not allowed to substitute them. In other words, why is it that the modern languages should be put under the ban by this body or by the state authorities, put to a disadvantage, and so discouraged? A boy begins the study of Latin and another boy begins the study of German. If the courses are equally severe and equally rigid, and the teachers are equally competent to do good work for their pupils, why is it that so much greater latitude should be allowed for the Latin than for the German? I do not understand why a boy who studies German, provided he has equally good opportunities for getting real educational advantage out of it, should be tied up in such a way that he will be put at a disadvantage in getting a Regents' diploma which he is not put to if he takes Latin. I wish somebody would make that plain to me. I like to be satisfied about these things. If there is unanimity of feeling about it, there must of course be a good reason for it.

*Dr. Watkins:* I judge that Principal Emerson may be laboring under a misapprehension. As I understand the power of substitution in the case of French and German, they have equal power. I did not know that there was an unjust discrimination made against them. I should be very much pleased to hear Principal Emerson state the matter as he understands it.

*Principal Emerson:* If a pupil passes successfully through Cæsar and Virgil, for instance, he has five credits allowed him, has he not? He can substitute three of those in either group one or group two. Now if he gets four in German will he be allowed to substitute in the same way?

*Dr. Watkins:* I so understand it.

*Principal Farr:* Are we to understand that this new plan contemplates four different kinds of diplomas instead of two?

*The Chairman:* That is the understanding of the Chair.

*Principal Farr:* Do I understand that the proposition is to make German or French a substitute for Greek, and grant a college entrance diploma on that basis?

*Principal Lovell:* The Committee has been acting on the principle that the old name *college entrance diploma*, was to be dropped. It is a matter of fact that more students are admitted to college on the old English diploma, formerly called *the academic diploma*, than upon the *college entrance diploma*, it seemed to us it would be much wiser to drop the old formula entirely, and differentiate these diplomas according to the language upon which they are based. The old academic diploma can be secured by a student who has never studied any language except English. Therefore we have called that *the English diploma*. This new diploma can be secured only by students who secure a tolerable degree of scholarship in modern languages. Therefore we name that *the modern diploma*. The old so-called *college entrance diploma* was not a college entrance diploma nearly so much as the academic. So as a matter of fact we are to call it hereafter *the classical diploma*. If it shall seem good to the authorities at Albany to act upon this proposition to substitute German or French for Greek in the old schedule of studies that made up the old college entrance diploma, or the new classical diploma, then that will make a fourth diploma, to be called perhaps *the Latin-German* or *Latin-French diploma*, that should admit to courses in philosophy in those colleges which divide their courses in this way, a course in arts equal to the classical course, and a course in philosophy based upon Latin and modern language, and then courses based entirely upon modern languages, with none of the classical languages taught or required in that course. We will then have a diploma to admit to a straight arts course; a diploma to admit to the course in philosophy; and another diploma—this new one, *the modern diploma*—to admit to the course in science or to the course in letters, in the various colleges of the state. And, by the way, let me add, the *old English diploma* admitting to courses in technical schools pure and simple.

*Principal Farr:* When colleges grant the A. B. without Greek, it seems to me it is abundant time to call a college entrance diploma

a college entrance diploma without Greek. It seems to me that every one of us who is interested in classical study ought to rise up in arms at once on this floor against any suggestion of anything of that sort. I understand perfectly well and the world understands what we mean by a college entrance diploma. I would maintain that no one of us is deceived. When a man prepares for college and expects to get an A. B. he always carries with him the Greek, and as I understand it he cannot get such a degree without his Greek. When the colleges open their doors and say. "We want men to be considered prepared for the course in arts without any Greek," then it seems to me it is time for us to adopt this revolutionary measure, and not before.

*Principal Lovell :* When Johns Hopkins University and Harvard University,—two of the leading four universities of this continent,—will give the A. B. without Greek, it is too late in the century for us to insist upon Greek as one of the prerequisites to entrance to college.

*Prof. Williams :* It seems to me that the proposition of the committee as it comes before us embraces two propositions, one of which was the one which they recognized as their legitimate work, and another that which they have been convinced was important during the progress of their investigations. Now I should judge that there is a considerable degree of diversity of sentiment upon the second part. I rise to move that the question be divided, and that the question be put first upon the recommendation of the committee for the establishment of this new diploma; leaving the second part, with regard to an additional diploma for Latin-German or Latin-French courses to come up and be discussed afterwards. (SECONDED.)

*The Chairman :* The question is now upon the division of the former motion.

*Principal Cheney :* As the maker of the original motion, I am ready to accept the amendment without putting it to the Association further, if the seconder is ready to accept it, without taking any further time.

Principal Verrill, the seconder, consented.

*The Chairman :* The question now before the house is on the adoption of the report of the committee as far as it concerned the matter originally committed to their charge, viz.: the institution of



a new Regents 'diploma, in which French and German should be substituted for Latin and Greek, some scientific studies being included; and which is to be called *modern diploma*. (CARRIED.)

*Prof. Williams*: I move that the additional proposition of the committee be recommended to the Regents of the University as the voice of this Association. (CARRIED.)

On motion of Principal Verrill the consideration of the question of courses of study in teachers' classes was made a special order for the opening of the evening session.

The consideration of the topic *Natural Science in Secondary Schools* was then resumed.

*Prof. Newberry*, of Cornell University: As to the desirability of the study of physics and chemistry in the high schools and academies for those who do not go to college, I suppose there can be scarcely any doubt. The constant calls that a man has in these days, in almost any path of life, to know something in order to read understandingly and discuss intelligently questions that involve some knowledge of elementary science, it seems to me put it beyond argument that physics and chemistry are an important part of a general education. But with regard to the colleges, the question may be whether the schools should introduce students to those sciences, or whether that should be left for colleges and universities. Some teachers in colleges and universities have been in the habit of saying that they wanted the students left to them; they wanted to give the first impressions in regard to science. I do not hold that view at all. Of course it is possible that such a study as physics or chemistry could be so badly taught in the schools that the knowledge obtained would be worse than useless. But I think that that contingency is not at all likely to arise. Ninety-nine times out of a hundred it will be so well taught that it will be of immense value as a preparation for further study in the colleges.

I have within the three years that I have been teaching general chemistry at Cornell collected statistics annually from the classes that came in. I have handed them slips and asked them to fill out those slips and tell me how much chemistry and physics they had studied before; where they had studied; and whether they had had any laboratory practice. I find that of the students who enter, almost all have studied in academies; only about thirty per cent. have studied chemistry before. Some have studied physics. Of the

thirty per cent. but a very small percentage have had more than a very short course, generally as low as fourteen weeks in chemistry. I do not think that a high school or academy is really teaching the subject in a worthy way unless the course covers a whole year. Now, if there are any studies which high schools can teach in an effective way, it is elementary physics or chemistry—with the excellent text books that have been prepared and with the able teachers now easily obtained, since our universities and colleges are turning them out in great numbers, thoroughly competent to do this work in academies and high schools.

I think that in the high schools it is almost too late to begin the study of chemistry and physics. It is certainly none too early. In the high schools the proportion of the number of students to the number of teachers is probably very much smaller. The teachers of sciences in academies are able to give personal instruction to the student. They are able to study, to assist, and to help them over the difficult places as we in the colleges cannot do. In colleges we stand up before the students and give lectures. The class to which I lecture in Cornell University numbers this year two hundred and eighty students. You can see what an undertaking it would be, without a large force of assistants, to give any personal instructions which would bring out of the student, against his own will, the best there is in him. If a student has no natural interest, in a great number like that, we have to let him go. We cannot help him along.

I think the work that ought to be done in the high schools is to give the students as thorough a course as possible in the scientific principles of chemistry and physics and to endeavor to interest them as much as possible. The more I see of teaching the more I am convinced that our time is thrown away where we do not create an interest. I do not know any age at which interest can be more readily awakened than that at which students are in academies. They are much more susceptible to the awakening of interest at that time than they are in the universities.

It does not seem to me that qualitative analysis is, as it is generally taught, scientific. I believe that the average plan of instruction as to precipitates and test tubes in the academies is worse than useless—that the time is worse than thrown away. Of course if the student goes there to amuse himself merely and pass the time in an entertaining way, it may serve that purpose; but if he does not know thoroughly what he is about, it is worse than useless. It is impos-

sible that he should know thoroughly what he is about if he takes up qualitative analysis before he has studied theoretical chemistry at least a year before he begins analytical work.

I would not teach chemistry without a laboratory under any circumstances. I think that the time is thrown away that is occupied in lectures and recitations alone. In the second of the essays that were written for and published in *THE ACADEMY*, the one that was given first honorable mention,—that of Mr. Ballard,—was the following:—"It matters not that the lectures to which I listened were delivered by one of the ablest teachers that this country has ever produced and that they were explained and illustrated by a most elaborate series of experiments. If I had done myself in the laboratory one-tenth of the experiments I saw performed before me, I had known more chemistry." With three or four years' experience in teaching students both in the laboratory and in the lecture room,—only about half our students are able to give the time to take the laboratory course. The more I see of it, the more I am convinced that the instruction in the laboratory is the only instruction that is of any value.

I think many academies are deterred from the introduction of chemistry through the belief that it can only be taught properly in a laboratory, and that it will be an expense to equip one and costly to maintain it. That is not true. Three years ago we fitted up a laboratory for 120 students, putting in the furniture and buying all the apparatus necessary for those students at a cost of four hundred dollars; and that laboratory is used to the present day. A room not over 15 by 25 feet is large enough for a laboratory for twenty-five students. Tables can be put in and laboratory equipped for one year at an expense of certainly not more than \$150 and probably not over a hundred. I should put \$150 as the maximum.

*Professor Cooley:* I want to say in the outset that I came in so late that I failed to get what had been said in this discussion, which I understand had been begun before. I have listened with the greatest pleasure to the remarks which have just been made, the pleasure that always comes to me when I can listen to one who is expressing my own ideas in better language than I can state them myself. This matter of teaching the sciences in the secondary schools has been put before you by the former speaker in a way which compels my assent to almost every statement. As to the desirability of the sciences in the secondary schools there is no longer



any question. It is wonderful to see what progress has been made in that direction. I remember a few years since when the struggle of those who were in favor of the teaching of the sciences was to make it claim a place and to get it into the secondary schools at all. It could not compete in the opinion of the educators with the old established lines of study. Those who were preparing for college certainly had no time to devote to this, said they ; those who were preparing for the work of life needed education in the humanities, rather than in the relations of the laws of nature. But I am glad to hear it said here that the discussion is not to be upon the desirability of the sciences in the secondary schools. The point now is as to how they shall be conducted in the secondary schools. However, I want to say one thing in regard to the desirability of the study of the sciences in the secondary schools. I speak of it from the side of the college. I was glad to hear the last speaker say that he had no sympathy with that idea that college professors should be inclined to have students come to them wholly free from scientific knowledge or training. I do not at all sympathize with that idea. The colleges are to give the higher education ;—education that should be a continuation of the education that has been so well begun in the secondary schools. I think this ought to be true of all departments ; not only of classics, of mathematics, and of language and literature, but it should be true of all those lines of study which go to make up a part of the higher education in the colleges. They are there by common consent, by common demand. We cannot reject them if we would. The idea of abandoning them is not to be entertained for a moment. But if we accept that demand, we assume the responsibility of making the study of science certain, complete, full by college work ; work that shall be upon the same grade with the work which is done in mathematics, in languages, and in English literature. It is not elementary work ; it ought not to be elementary work. It should be work that is suited to the same grade of mind that is being developed by training in these other departments. But what is the fact ? Students come to us in the college without the slightest knowledge of the science of nature. They have never been taught to see what they look at. It is astonishing how blind they are. You may place any phenomenon before them that you please and ask them to give you the salient points of that phenomenon, and they see nothing. They have no idea of looking at a thing with a view to telling what they see or making use of what they see. They

come to us without that power of observation, without that habit of drawing inferences from what is seen, which they had in the outset, but which is neglected in their education. They come to us with that atrophied. They are utterly unable to bring it into action. As a matter of fact the college professor who takes students under such conditions is almost compelled to create the faculty of observation, or create the power of reasoning. He must create the faculty instead of developing that which has been prepared. I claim that it is desirable from this point of view that science should be a part—and not only a part, but a *prominent* part, just as prominent a part of the education given by the secondary school as the education given in mathematics and languages, in order that education in college may be higher education. I claim that it is desirable that the secondary schools should give this training for the sake of education, and not for education in the abstract, but for the sake of the mind and character which the educational processes of the schools are designed to form. It is for the sake of mind and character that I claim that the natural sciences should form part of the curriculum of secondary schools.

Now, as to how this subject should be presented. That is a question which is not as difficult to consider as it was a few years since. By the remarks of the former speaker, the practicability of the introduction and treatment of the sciences has been shown. I can add my testimony to the truth of what he has said. I think that science should be a part of the course of instruction, beginning just as soon as the pupil has been taught to compute with some degree of accuracy and rapidity, just as soon as he has acquired the ability to express himself with any degree of freedom. In a word, I believe it should be introduced into the primary schools; and then that it should be made a continuous course, just as mathematics and languages are. As to the method in which it should be presented, I think there is no question. The study of science should be a study of nature, and not what somebody has said about nature. It should be a study of things, and not the study of books, except so far as books are helps to the study of things. The student in chemistry should stand at his table, he should contrive his apparatus, he should arrange his conditions, he should bring about his reactions, and he should be able to trace step by step the reason of everything that transpires and be able to show the relation of every step to each one that went before. Such a training as that, if it be in chemistry, is

good ; if it be in physics, is good ; if it be in any science whatever, provided the mind can be brought directly in contact with the objects and given that training which mathematics and literature and science can give, it is good.

If I were to suggest I should say begin with botany, because botany is the elementary science of observation, as chemistry is the elementary science of experiment. As to the method which shall be employed when you come down to detail, that is a point of which I have always shrunk from speaking. The methods by which teachers reach great results depend so much upon the nature of the teacher himself. It is difficult to teach the art of teaching well. Let the teacher have a clear idea of the relations of the subject which he is presenting and the faculties and activities of the mind which he is cultivating or developing, and then let him follow those methods which in his own mind will best bring about those results ; and I think that the final results of the work will be better than if he had followed the directions of another person.

On motion, the Chair named as members of a committee to consult with Normal School principals regarding training classes, Principal Cheney, of Kingston, Principal Clapp, of Fulton, and Principal Hill, of Cook Academy, Havana.

Principal Capen moved that the chairman of this meeting be made the fourth member of the above committee, to act as its chairman. Seconded. Motion put by the secretary and carried.

ADJOURNED UNTIL 7.30.

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THURSDAY EVENING.

On motion of Principal Cheney, Dr. Dewey was requested to address the conference.

*Dr. Dewey:* I came here to listen rather than to speak. It seems to me we, in the office at Albany, should be much more likely to be of service to you, if we come more in the spirit of learning what the principals need than in that of telling them *ex-cathedra* what we think they need. My own conception of the higher educational requirements of the state is that we look to the academies especially as our greatest strength. For whatever excellent plans may be



made by the colleges, whatever facilities may be offered by them for higher education, they can do absolutely nothing unless they are supplied with candidates. We must look to the academies to supply our colleges and universities with their men or nothing can be accomplished. So whenever I think of a brilliant future for higher education in the State of New York, my thought goes more to the academies than to the colleges. I feel an intense interest in this work and it would be my pleasure to meet with you as often as you meet where I have a proper place with you, and to learn your views and your wishes. But it does not seem to me it would be wise in me to come into this meeting (the first I have ever attended) and presume to make an address, before I have heard any of your views and got in touch with your methods at these gatherings. I will say a word or two, however, about the subject of examinations by way of opening the discussion.

The extreme delicacy and difficulty of making a set of examination papers to go through the three hundred and odd academies in this state, and be satisfactory to all of them was impressed upon me in coming into the Regents' office. I have nothing to do with making those papers. That is the department of the assistant secretary, so I speak something from the standpoint of an outsider. There is in the librarian's profession an old proverb that has come down through many years, of this sort. "If you have a conceit of accuracy and would have it wholly taken out of you, print a catalogue." In the same way I think many who criticise the papers emanating from the Regents' office would be in a more charitable frame of mind if they would make those papers once and send them out. It is not an uncommon experience to send out a paper and after the examinations to receive a couple of letters abusing the paper roundly for being so very difficult; and in the same mail get about equal abuse of it for being below the standard. Then we settle to the conviction that if it is too high for some and too low for others, we must have struck a golden mean. Sometimes the tendency of the majority is that it should be higher or lower. I look upon it as one of the most difficult and delicate pieces of literary work that I know of.

It is not simply scholarship that is required to make those papers, but knowledge of the wants of the schools. We are going to get at those wants by free criticism, by free expression of opinion on the part of the principals. There is nothing which gives the office so

much pleasure,—and I mean absolutely the entire office,—as frank and free criticism and the suggestions that you send in. When we send out a paper we want to know how it meets the wants of your schools. The difficulty of making these papers led first to the consideration of the desirability of two examinations a year instead of three. Those papers cannot be made and be made at all satisfactory to you unless a great deal of time is spent upon them. There never has been any organization of the Regents' office which has allowed for time or the expense of making proper papers. That was one thing I looked into especially this summer when I went across on the other side to see what was done there. I found at Cambridge and Oxford that they would spend an amount of time in getting their papers ready to go out that would scandalize the Regents' office by its wastefulness.

If we make three sets of papers a year with a given amount of time and money, we can give only about two-thirds as much labor to each individual paper. That is one reason why two examinations a year are better than three.

Then there is criticism coming up from many quarters that we are spending too much time in examinations. And then there was the desire from certain schools to have two examinations a year as being better for their terms and as being altogether more valuable for their schools. So the suggestion was made that we have two examinations a year instead of three. But there is another side to it. It seems perfectly clear from the evidence that we have received that there are at least 150 schools in this state that will be better served by two examinations than by three,—be better satisfied. I am perfectly clear that those schools ought to have two examinations a year. On the other hand there are a considerable number of schools—how many I do not know—but I know that a number of the ablest principals in the state are clearly convinced, after years of study and work in those schools, that they need three examinations in the year for the best results. I said to the Regents what I say to you, that it seemed to me, without attempting a discussion, that as long as those principals felt that their schools required three examinations a year it was the duty of the Regents and the duty of the state to provide those three examinations, even though they might be mistaken. If there are fifty principals who believe deep down in their hearts that they must have three examinations a year in order to handle their schools successfully, I think it would justify the extra

expense and labor of giving them those three examinations, until they are convinced that it is not better for the schools. In these views Mr. Thomas and Dr. Watkins entirely agree. We feel that it is our duty to know your views, and we feel that your wants will coincide pretty closely with your wishes.

Then comes this practical question: Is it possible in any way to combine the examinations on these two plans? I throw this out as a suggestion, because we are very anxious to find what the Associated Principals think of it. It seems that we need at the June examination a full set of papers on all subjects. Would it be possible in the November examination, and perhaps in March and in January, to give, not all the studies, but say ten or a dozen of those that were most desired? Would it be practical, for instance, to put in the June examination such a study as botany? Very few schools would care to take up botany in the winter term. Wouldn't it answer every purpose if we had two examinations in botany each year, instead of four? You see that this scheme of two examinations for certain schools and three for others, means four examinations in the Regents' office, and complicates the making of papers. Do not understand me to say that the State of New York cannot afford and is not willing to make, if necessary, four sets of examination papers a year. If it will meet the wants of the schools to give in June a complete set of examinations, and to give in November a limited list, preliminary subjects and a selection of the other branches, it would help the matter very much. It has occurred to me that perhaps if it were understood that certain subjects would be left out at these various times that the courses of study in the schools might, without much difficulty, after a year or two, be fitted so that they would be just about as well served to have a dozen subjects in November as to have the entire forty or fifty. It would also reduce the labor of the principals in conducting the examinations and the work of the office in sending them out. I throw that out as a suggestion for discussion.

As closely associated with that matter, I should be very glad indeed to hear an expression of the principals as to the desirability of another measure, which seems to me very important. Starting with the concession that the Regents' office is created by law and ought to be carried out for the purpose of helping the higher educational interests of the state—not for giving them orders and having control and making formal reports, but for helping their interests as



fully as possible and for doing all those things that need to be done in a certain office. I think our success is very largely dependent upon the most intimate relations with the principals of the state and the entire confidence of the principals that we are working solely for their interests; that we, in the office there in the corner of the Capitol at Albany, are just as much your representatives as the men in the Senate and Assembly that you send from your districts are the representatives of your interests. You expect, if any question comes up which affects your section, that your representative at Albany is going to look out fairly for your interests. My conception is that in the Regents' office the secretary and his staff ought to be your representatives there; and that it is our duty to study your wants and wishes, to find out what will really help on the cause of the academies and colleges of this state, and then do such work as will help the individual schools. It seems to me the greatest need we have before us at the present time is to secure in the Regents' office at least two Regents' inspectors. I am not now speaking officially. I am stating my personal opinion, as the means of drawing out your sentiments and wishes. I should like to see the two ablest men we can find in this state, or out of it (but I think if we took the two ablest men to be found for this work in this country we would find them in New York State), thoroughly instructed in the work of the academies of this state and enthusiastically devoted to that work, who should go into the Regents' office to give their entire time as inspectors. I should like to see them going about the state, visiting its nearly four hundred institutions, counting the colleges and academies; go into each school; try to find out what was the special good in that school, what they had accomplished; commending what was good. Not for the purpose of coming into your school and saying, "You are making a blunder here or there, and you ought to do so and so"; but who should come to your school, having his whole time for this work; who went from school to school and had his heart in it; was especially competent and familiar with the whole subject, not only in the manner of conducting schools in this state, but in other states and other countries; who made that his business and was thoroughly familiar with every phase of the question; and who if he came to your town would know what was being done in similar towns of about the same class and population. If you have a school in a manufacturing town of ten thousand inhabitants, he has in mind other towns similarly situated, the schools of which have

been most successful, and he understands why. You say, "I have this difficulty and I am a little puzzled about this ; here are two alternatives, which shall I choose ?" That man stands ready to give you advice.

My opinion is that two men of that kind traveling about the state, on the average seeing only one school each day, would be of great benefit to the Regents' office in keeping in close and thorough touch with the academies of the state, and would be of great benefit to the principals. If I were a principal, I should think it the most profitable day of the year when I had with me a man who had these peculiar facilities for affording me assistance, whose time was at my disposal ; and who would be glad to answer my questions, to give me light upon all my difficulties and to tell me what was being done in other places in a way that I could not find out from my personal knowledge unless I had all my time for travel. It seems to me that two men of that kind giving their time to traveling about the state would do a great deal in bringing us into closer union.

I think a meeting of this kind is worth everything to the higher educational interests of the State of New York. We get acquainted ; and we go home and do better work because of meeting together in this way. I think the Convocation in the same way has a beneficial influence. I think both these meetings can be strengthened. These inspectors would get men to come to these meetings who do not come here. But chiefly it would be a means of leveling up all the while. The best schools would have their methods carried to others ; and these men traveling from school to school could bring back to us the best possible information, in regard to these examination papers and on every question that interested the academies as connected with the Regents' office, that would be simply invaluable. When Professor Hawkins was in our office, in connection with the teachers' classes, we had a part of this work done as far as one man could do it ; but one cannot cover this state. I do not believe our office, or any other office, can do the best kind of work for the schools or any other institutions unless they come in personal and actual contact with them.

I speak of this as a suggestion to draw out your opinions as to the desirability of having these Regents' inspectors, to spend their time traveling through the state and bringing us closer together.

I want to repeat what I said before, that there is nothing that will make us so grateful in the office as to have every principal feel the

utmost freedom in making suggestions as to any of the work of the office. If you can suggest anything that we can do that will help your schools, we will do it if it is practical. In any case we will be grateful to you for the suggestion, because then we are convinced that you are interested actively and believe the office can be of some service to you.

*Dr. Watkins:* It would be difficult, I think, to suggest any one line of topics which would suit all the schools. I think a tentative list might be made, after some consultation with principals of schools of different grades, which would be to some extent a guide in the matter, and which might offer valuable suggestions. It seems to me that a committee of five or six men, representing schools of different kinds in the state, coming together informally for a little time, consulting about the matter, looking over their courses of study, seeing what they had in the fall, what in the spring, and at different times of the years, would give us valuable hints as to what we should do. There are certain subjects which would naturally come in the fall, which would suggest themselves at once; for instance, the preliminary studies that we might have in the first group in the academic system. Others might suggest themselves according to the season of the year, or the degree of advancement in certain studies. But I would not dare to suggest here, without further thought and consultation with the different schools represented, any particular list.

The following resolutions were adopted:

*Resolved,* That it is the sense of this association that the suggestion of Secretary Dewey that in November and perhaps at other times of the year a partial list of subjects be presented for examination, a full list being presented in June and perhaps in January, is feasible and should be adopted.

*Resolved,* That it is the sense of this body that the appointment of two inspectors, to be connected with the Regents' office, whose duty it shall be to familiarize themselves with the wants and needs of the schools of the state and make such suggestions and use such measures as seem adapted to promote the interests of education in the state, would be a useful and valuable measure.

ADJOURNED TO TOMORROW MORNING AT 9 O'CLOCK.

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FRIDAY MORNING.

The report of the Committee on *Courses of Study in Training Classes* was presented by its chairman, Principal F. J. Cheney.

*Principal Cheney:* Mr. Chairman and Gentlemen of the Associated Academic Principals:

The report we have to present this morning is not wholly the result of the deliberations of the joint committees that have been had during the past day or two, but also the result of a good deal of thinking back of those deliberations. As is well known, especially by those who have this year interested themselves in the training classes throughout the state, a joint meeting of the representatives of the academic principals and of the normal schools, got together in Cortland and formulated a course of study which the training schools are pursuing at the present time. It was then stated that what was done was simply tentative. We did not expect to do anything that should be perfect and it is not expected that we have done anything now that is perfect, but it is the opinion of the members of the committee that progress has been made.

I will proceed to read the report that we have to make, in the following resolutions, which have been prepared by the joint committee:

1. A certain number of union schools and academies throughout the state, equal at least to one for each school commissioner district, may be appointed to instruct training classes. The basis of the appointment shall be the facilities afforded by the board of education or trustee to do the work required in the instruction of their classes.

2. For the instruction of these classes a teacher shall be appointed who is qualified by professional study and experience to do the work required.

3. The course of instruction should be based upon the elementary course of the normal schools, so modified as to meet the needs of those teachers who within the limits of one year are preparing to teach in public schools.

What that course shall be and the modification of it is to be determined in the future by proper committees appointed at meetings of this Association.

4. The time of instruction should be extended to two terms of at least sixteen weeks each.

The time is not to be less than thirty-two weeks in the aggregate. Of course it may be more, if schools find it possible to give more time. But that is simply a minimum.

5. Upon the satisfactory completion of this course, as ascertained by an examination, the pupils shall be entitled to a second grade commissioner's certificate, especially endorsed by the State Superintendent, as a training class certificate, and pupils may be admitted and passed without further examination, in those subjects into the normal schools, which the course of the training class covers; and in justice to those classes we beg leave to recommend to the normal schools that the elementary course now pursued in those schools be abolished or made to cover a more extended course of study.

6. By proper legislation a sufficient appropriation ought to be secured to compensate reasonably the schools instructing these classes; and this compensation shall depend upon the number of pupils belonging to the classes who have satisfied the condition of admission, and also the faithful performance of the work required.

7. A committee shall be appointed by the chair consisting of seven members whose duty it shall be to assist in carrying out the provisions of these resolutions.

On motion, duly seconded and carried, it was decided to consider the resolutions seriatim.

After the reading of number two, the question was asked whether the appointment of the teacher would come from the State Superintendent or some other authority.

*The Chairman:* It is understood that the State Superintendent will deal with schools—not with individual teachers. In applications for appointments to instruct a teachers' class it is required that the institution applying give facts in regard to the teacher proposed to be engaged to instruct the class; and if those facts are not satisfactory the Department has control over the matter by its discretion in appointing a school. It is not contemplated that the appointment of the individual teachers shall be carried to the Department.

*Principal Hill:* It seems to me that in order to make this work a success it will be necessary to have some permanency to these classes. It has been suggested that the appointments should be for one term simply, with the understanding that if the work is not satisfactory the class will be discontinued. It seems to me that if the various classes provide a teacher to do this work, it is necessary that the work should be at least for a year, in order that anything like success can be attained. The one great trouble in the past about this work has been its uncertainty. We do not know oftentimes whether we are to have a class until after the term begins, and do not know whether we shall have one the next term or not. If we are going to make a success of it we must have a certain degree of permanency in the work.

*Principal Bullis*: What I desire to say is directly in the line of what the previous speaker has said, with this slight difference. Suppose, in compliance with one of the former resolutions, we secure a teacher to instruct a class. To secure a teacher who is competent to instruct the class it seems to me we are obliged to hire for a year. If we are left at the end of the sixteen weeks without an appointment, there is a heavy loss entailed upon the board.

*Principal Mills*: I think the intention of the committee was that the appointment should be for one year. The purpose of dividing it into two terms of at least sixteen weeks each was this:—that a person who was not able to attend during the whole year might be able to step out at the middle of the year and teach to the end of the year; and then take that place in the next coming class. I think that would be simply fair. It is not every one who attends a teachers' class who can attend a complete year. It was the intent of the committee that that should be in mind.

*Principal Hopkins*: I would like to move the insertion of the words, "or three terms of eleven weeks each." I do not wish to do anything contrary to what was in the minds of the committee; but not being on the committee and not having heard their discussion, I do not exactly understand the plan.

Amendment seconded.

Discussion followed, at the conclusion of which the motion to amend was lost, and the resolution as read adopted.

Number 5 was then read.

*Principal Smith*, of St. Lawrence, offered the following amendment: That members of training classes be given a certificate for three years, to be known as a *training class certificate*.

The question was then put upon the adoption of the amendment of Principal Smith, of St. Lawrence, to number five and the same was carried.

Number six was then read.

*Principal Bullis*: What is to constitute *faithful performance* of those duties? Is it to be judged by passing examinations?

*Principal Cheney*: That I suppose is to be determined by the inspector of the State Department looking after these classes, as he is now doing. \* \* \* This does not contemplate the ascertaining



of it by examination. As I understand it, the work is to be performed to the satisfaction of the Department of Public Instruction.

*Principal Hill :* Do we understand that the compensation for the work of this class is dependent upon the number in the class ?

*Principal Cheney :* Yes.

*Principal Hill :* It seems to me that is entirely wrong, and will lead to a partial failure of the plan. If a class has but ten in it, it will cost as much to conduct it as though it had twenty or thirty. We are supposed to secure a teacher for this work. The number in the class should have nothing whatever to do with the compensation of the teacher. It also seems to me that the question of examinations should have nothing to do with the payment of the amount appropriated to the class. If a class is started under the supervision of a teacher approved by the Department of Public Instruction, the amount appropriated ought not to depend at all upon any subsequent examination. If the work of the class is not properly done, then the remedy that the State Superintendent has is to refuse, in the future, to grant a class to that school. But so far as that particular class is concerned, it is plain to me that there ought not to be any doubt. How would it be if the normal schools were put upon the same basis ? Perhaps at the time when the examinations came there might be an epidemic in the school and no one be able to attend. It seems to me that it is a kind of penny policy that will defeat the end of this whole business.

The seventh resolution was then read.

*Superintendent Draper :* Mr. Chairman: As this discussion has gone on, it has occurred to me that we ought to be admonished by the fate of the sewing society that went to pieces on the question whether, at the next social, oysters should be sold at twelve or fifteen cents a plate. We have got certain general purposes to accomplish through this entire training class work. I am for accomplishing those purposes. There is no philosophy so useful to the human species as the one that pans out. It is quite important that we "get there" in some way, and that we do not spend too much time in discussion which particular road we will go, so long as there is reasonable likelihood that if we go ahead one way or the other we will finally come out at the same place.

If there is any one thing that the school work of this country wants, it is that no person, who has not received some professional training, shall be permitted to teach in a common school. The practical problem which addresses itself to the minds of educators is,—how shall we carry to the teachers of different grades this professional training to the greatest extent consistent with the circumstances in which we find ourselves? That is the practical problem. We have now ten state training schools in this state. I have never hesitated to say that I entertain the opinion that these institutions could not, in the nature of things, meet the needs of the ungraded rural schools, the elementary schools of low grade, for trained teachers. Last year the state normal schools turned out a larger number of graduates than ever before in their history, 536 as I recollect it. Last year the common schools of this state required six or seven thousand new teachers. Now it seems to me that the thing that is practical is to hold the normal schools up to a high grade of professional work, and to develop the training classes for low grade work, for work in the rural, ungraded schools; and as much more as experience shall show to be feasible.

I am ordinarily quite ready to agree with any well defined and general opinion that shall be arrived at after consideration, mature deliberation and investigation of all the circumstances and relations of things; but I am not ready to say to any one of you or any dozen of you that if you will get up some kind of a scheme and indicate to me that you believe in it, that I will follow with alacrity. This is a great problem. We have made some progress during the last year—not a great deal, but we have got a good start—and we see how much more progress, much more advantageous results will follow this work during the next year than it has been possible to derive from it during the past year. Last spring we met this whole subject face to face. It was a question what we should do. We did the best thing that we could. We got together a committee. I have heard that some one had suggested that somebody else ought to have been invited. Every one could not be invited. We took a representative committee, the only instrumentality that was at our hand; notified this committee to meet the normal school principals and consider a course of study. The work was hastily performed. Possibly just the same result was not arrived at that would have been if there had been more time afforded. It was understood then and it has been understood since that the arrangement was only tentative,

experimental, that we would try it and go on and see what experience would indicate would be wise for us to do. I have been quite surprised by the fact that the plan, the scheme which was agreed upon at that conference, has resulted in what seems to be generally understood to be oppression; that our exactions were too great; that some institutions which were designated could not organize under our regulations; and that some classes which were organized went to pieces under our plan. That was not anticipated. If that is true, as generally as seems to be indicated, it is very suggestive of another fact,—that you have not been accustomed to doing as substantial training class work as it is advisable should be done in such a state as this.

I want to say two or three things concerning suggestions that have come out in the discussion. It occurred to me as you were talking about this matter of terms, that it would not be a bad idea if in the Empire State we could get rid of this old fashioned nonsense about a winter term for the "big boys" and a summer term for the little girls. It occurred to me that it would be just as well, even in the rural schools, if we could have one teacher commence in September and continue on until the next June, rather than to have it understood that we must have a lady in the fall, a man in the winter, and a lady again in the spring. It seems to me that it would be just as well to get rid of that old thing. And then another thing, it seems to me that your arrangement of local terms, terms of school at home, is largely fiction. It is only made for local convenience. I apprehend that really the only local utility there is about it is that it enables you to fix a definite tuition fee for non-resident pupils. That is about the most important relationship that there is about it. It also occurred to me, that, if there was to be a break of a week or two in the course of instruction in the training classes, it would not be very much more serious than it is to have a break of a week or two in your other instruction. You have got to understand this thing; it is not very material at what time of the year these training class courses commence; but it is vital that they shall end upon the same day. It seems to be understood that we cannot go on indefinitely multiplying examinations. We have not facilities for doing it. It is not advisable that it should be done. I am in favor of so developing this work as to have the training class work continue substantially through the school year; not thirty weeks or twenty-eight weeks or thirty-two weeks, but substantially through the entire



school year. I am right in line with the resolution adopted by the city superintendents at their last council, namely:—that in all cities, incorporated villages, and union free school districts, after a fixed time in the future, no teacher should be certified who had not taken at least a year's course in a training school or class. We are working right to that end. Everything that is done points to a given purpose. I am in favor of the training class being so extended that it covers substantially the school year. But we have to bear in mind that it must be so arranged that all the classes close simultaneously. I am not in favor of an appointment to take hold in September and end in June; and I might just as well say that it will not be done. I am not in favor of refusing to graduate a person from one of these training classes who does not take a year's course. That is exacting too much in the rural districts, and, as a railroad man would say, the traffic won't bear it, won't stand it. It will break down. There is no reason in it either. I am in favor of the appointments which are made in the fall being for a term of sixteen or eighteen weeks and being renewed in the winter if the work which is being performed in the class is of such a character as to justify the continuation. But I know enough of the practical administration of affairs to know this, that we will have a great deal better work (not in all sections, not in all institutions, but in some and in many) if the appointment for a half year is held open. It is not very nice to have the inspector of training classes go to an institution and find that the work that is being done is not up to the scratch, and say to the Board of Education or to the principal, "I shall advise the State Superintendent to revoke this designation and take up this class and discontinue it." It requires a man of no little courage to do that. It is disagreeable and unpleasant. We would all of us prefer to do pleasant and agreeable things than disagreeable. But if the matter is held open, if it is understood that the work, if satisfactorily performed, will be continued through a second term, all our purposes are subserved upon the one hand, and on the other we hold open an easy and ready way for taking a class from an institution that is not treating it right, and putting it into another one that will treat it better.

It might just as well be avowed with entire frankness, this training class work is not for the sake of helping institutions. It is not for the purpose of contributing to the support of local institutions at all. We are going to carry on this work in a way that will give the best

assurance of getting the most out of it and producing the most results.

This leads me to say one or two things touching the general principles which have operated and will continue to operate concerning the designation of institutions. I said to this body last year that I would be perfectly content if the matter of the designation of institutions were placed in another authority, and I feel so still. But it has come to me, and it has to be exercised upon certain general rules; first and above everything else, the character of the institution and the likelihood of its doing proper work; of its doing something more than making a farce of this work; the equipment of the institution; character of the man who is at the head of it; the disposition of the management of it; and the qualifications of the particular teacher who is to have charge of the class. All these things are to be given great weight. It was suggested to me by this committee that it would be advisable to provide that the teacher employed for this particular work should be approved by the State Superintendent. I said, no. To do that would get to be a farce almost; because it is impossible for anybody at the central office to know about the particular qualifications of each teacher who will be suggested, and in a little time it would get to approving everybody who came along.

That is the way those things go. The better way is to hold a check upon the designation of the institutions to carry on this work and to have it understood that the institutions that can do this work best are the ones that are going to be designated to continue the classes. Then there is another consideration which is to be taken into account; the equitable distribution of the classes over territory, so far as possible, so as to meet the convenience of the greater number. Those two things are principles and considerations which enter into the designation of classes. I am obliged to say with humiliation that when the time came to designate these classes I received no lack of information and persuasion touching this matter through political channels. I cannot understand what the present State Superintendent has ever done that would lead anybody to suppose that a political wire could be pulled which would influence the location of any teachers' training class which he had to designate.

I do not profess to be any more saintly upon political subjects than other men. I do not make any very high professions on that point. Where it is a simple matter of discretion, where it is a simple matter of choosing somebody to do something (and it does not make

a great deal of difference who it is) and where the rights of others are not involved, I think that my party friends and my personal friends are just as good as the other fellow's party friends and his personal friends. I do not hesitate to say so and to act accordingly. But I would as soon permit a political influence to be exercised in the determination of a purely judicial question upon an appeal to our department as upon the location of one of these training classes; just as quickly, and I serve notice, that wherever that thing is attempted, the application will fail if there is any way of defeating it. I do not think a single class was named at the last designation where there was any serious embarrassment brought to the State Superintendent through attempts at working political influence, and there will not be hereafter.

A word about this *endorsement* that has been discussed here. There is entire misapprehension about that. It would be physically impossible for the State Superintendent to endorse those certificates. That is not meant at all. It occurred to the office, when it came near the time for holding this last examination that there ought to be something upon these certificates granted at the close of the teachers' class work which would indicate that the holder of that certificate had taken a course in a training class. What was to be done?

First the suggestion was made that there be a special certificate prepared for it; and you have so far gone astray this morning (good men do go astray once in a while) as to adopt that proposition. Now if you are to take that course, you will not only multiply certificates (there are getting to be too many of them now) but you mistify the public mind as to what a certificate of each grade and class and kind means and as to what is its value. I am in favor of gradually retiring the second grade certificates to persons who do not pass the training class. But just so certainly as we set up a particular and special certificate as the result of training class work at this time, and recognize the two kinds going along on parallel lines, just so long they will struggle along on parallel lines for an indefinite time in the future. Therefore it seemed advisable that we should put something upon that certificate. What was it to be? Simply a notice upon the back of it and not an endorsement by the State Superintendent, with his signature, but a printed notice upon the front or the back of it, to the effect that this certificate was granted at the end of a course in a training class. Simply an announcement, noth-



ing that would change the legal value of the certificate, nothing that would alter its standing at all; but simply an announcement that the holder might show to anybody, as a little enhancing the value of the certificate. That was all there was of that, nothing more. That was upon the fullest consideration and I think that the better course.

If we shall, as I hope we shall be able to do, so shape examinations that in time it will be found easier to reach a second grade certificate through a training class than without it, or indeed get to a point where it shall be essential to go through a training class in order to reach a second grade certificate, we will have accomplished just what we are aiming for. It seems to me that it is feasible to work to that end.

Touching the appropriation. It is the purpose of the State Superintendent to join with you in a very earnest effort to increase this appropriation. We cannot develop this work as it must be done without a large increase in the appropriation. It is well to be wise after your generation, if you can, when you have got your hand in the lion's mouth. You have got to say, "Please let go" sometimes. There are certain characteristics of this system that you have got to adhere to or you won't accomplish anything. You may theoretically argue in your minds that because the normal schools are supported by state appropriations, built up and supported by state appropriation direct, that, therefore, these classes should each be given a specified amount of money, no matter whether there are two persons in the class or twenty or thirty. You will have a good deal of difficulty in satisfactorily impressing that theory upon the average legislative mind so they will see it quickly and work satisfactorily. The strongest possible point with you in this direction is that you may be able to say, "The appropriation which you make for this important work will be distributed upon the basis of the amount of work actually performed, competent work, proportionately to the different number of pupils." That thing is quickly comprehended and everybody is ready to say, "Why, if this work depends upon its merits alone, upon the number of persons who receive advantage from it, it is a good thing to encourage and to build up." It is not for me to decide just what sum we shall ask for; but I think if we ask the first year after undertaking to develop this thing, for double the appropriation which we have been receiving heretofore, and are successful in getting it, we shall accomplish a great deal, make a long stride forward, and will be entitled to congratulate ourselves upon our

success. But I have very serious forebodings that if we undertake to go much further than that that we will eventually fail, either at one end or the other of the Capitol. We will not fail at my end I believe.

I am very much interested in the work. I have confidence that we have an arrangement in this state for the professional training of teachers of all grades and for all classes of schools that is far in advance of anything else that has ever been undertaken in this country. I am entirely satisfied that if we keep good natured, if we are ready to let non-essentials go in order to conform to a general system that has a definite purpose in view, and if we keep at it for five or ten years (and that is really a very little time as these things go) we shall have gradually and definitely worked up to a professional training service in our state for all of the more prominent places, if, indeed, we are not able to extend it into the cross-road districts.

Principal Verrill moved to re-consider the vote whereby the amendment as to three years was adopted. (SECONDED AND CARRIED.)

The question was then put upon the last mentioned amendment and was lost.

On motion of Principal Hawkins, duly seconded and carried, it was directed that of the committee provided for in the last resolution to be appointed by the chairman, the chairman of this Association be a member and act as its chairman.

*Principal Verrill:* There is one thing which I believe by unanimous consent ought to be changed. The resolutions have been read with that amendment, that the State Superintendent "endorse." I think in view of his own suggestion that printed matter be put upon it, it should be amended by unanimous consent, so as to make it conform to that suggestion.

*Superintendent Draper:* The proposition of the Department was to send to school commissioners a slip, to be attached to training class certificates, which should read as follows:

*The holder of this certificate has been a member of a training class in..... for.....terms, and has received special instruction in the theory and practice of teaching, as prescribed in the courses of study arranged by the State Department of Public Instruction.*

These printed slips are to be forwarded to commissioners to be attached to certificates of this particular grade.

I do not suppose that you recall the fact that, if we were to undertake to make an additional certificate, and were to make another as handsomely lithographed certificate as our state uniform certificates are, it would cost us several hundred dollars to print the certificates. Perhaps I ought to say several thousands. The present state uniform certificates that we are supplying to school commissioners cost thousands of dollars a year.

*The Chairman:* If there is no objection, it will be understood that the resolution speaking of endorsing this certificates refers to the attachment of the slip mentioned by Judge Draper.

The question is now upon the adoption of the resolution.

Professor Williams moved the adoption of the resolutions as a whole. (SECONDED AND CARRIED.)

After a short recess the chairman introduced Chancellor Sims, of Syracuse University.

*Chancellor Sims:* Gentlemen: We would be greatly pleased to have the teachers now in session visit our University buildings, either as a body or personally. The completion of the John Crouse Memorial College and our new library building give an unusual interest. We shall be glad to see you. It is vacation with us, and we are, therefore, somewhat embarrassed as to arrangements for showing you through; but we will try to have some one present all of the time, and if at any time a number of teachers come together, I would be glad personally to be there and conduct them through the building or buildings.

This invitation was accepted, and a vote of thanks passed.

*Principal Clapp* presented the following:

"*Resolved*, That the Superintendent of Public Instruction be respectfully requested to make a further division of the teachers' institute work, so as to provide for separate instruction, so that separate instruction may be given to beginners on the one hand, and to experienced and professionally trained teachers on the other hand."

I am induced to offer this resolution for the following reasons: I believe that four or five years ago there was a change made in the institutes, requiring every teacher to close his school and attend. That threw upon the conductors of the institutes four or five hundred



in large counties. It was soon found to be impracticable to handle that number. After that this institute work was re-organized and one held in each school commissioner's district. That still leaves in many districts an institute of one or two hundred, entirely too large a number for any one man to conduct. I am aware that the conductors are working with good spirit, are well qualified and are without exception men of good ability and good spirit; but I am equally well satisfied that they cannot conduct institutes profitably with this number. They are a good deal embarrassed in this way:—A class of perhaps 150 or 175 or 200 is made up of beginners, without very much literary culture, and at the same time teachers of experience, some of them college-bred, and some graduates of normal schools. And I think the teachers are just as much embarrassed as the instructors.

As the principal of a school of perhaps twenty teachers, I hear a good deal of complaint from very intelligent teachers. They say, "We would be very glad to attend the institute if we could have an institute for ourselves; but to go and listen to instructions that must be given to beginners, year after year, and only now and then a single exercise given in our grade of teaching does not satisfy us." There is a very general dissatisfaction with the matter.

*Superintendent Draper*: No one need apologize for making a criticism upon any work that anybody else performs. If there is anything that we want it is direct, honest, good natured criticism. So long as a fellow keeps good natured and does not have too much circumlocution in saying what is on his mind, he is all right.

We have discussed this institute question a good many years. There is something in the feeling to which Principal Clapp gives expression. We have tried the plan of departmental institutes, of a division of institutes, and it is fair to say that it has never worked satisfactorily. A teacher in one department is continually feeling that there is something more interesting in the other department, and they want to get out and go over there. It lends demoralization to the whole thing. Neither can we go on increasing the expense of our institutes. There is no branch of our work in which we are more interested than in this institute work. There is no part of our work we are trying to do as well as this; no part upon which we expend so much thought and labor.

A year ago the legislature amended the statute so as to provide that in all union free school districts having over five thousand in-

habitants and employing a person who devoted his time exclusively to the supervision of schools, the Superintendent might make an allotment to such districts of the sum of eight hundred dollars towards the expense of supervision. Of course you see what the plan of that was. It was to create supervision; it was to provide superintendence in all places of any considerable size. Now the report of the Department for this year, which is now in type, recommends that in all union free school districts employing a superintendent who devotes his whole time exclusively to supervision that attendance upon the institute may hereafter be optional. The idea is to develop the superintendence of the training classes in each district to the highest point possible.

I want to say another word though. Don't you fellows imagine that all the smartness in creation was piled up in your door-yard for nothing. You are bound to develop it fairly. You have no business to act as sponges; go to an institute and simply sit still and complain that the wisdom that is being disseminated is not up to your plane. If your plane is higher than the institute plane, take hold and give the rest a lift. I want you to understand that colleges and academies and high schools and all that kind of thing exist only by right of the amount of work that each does for the common elementary schools.

I do not want to be understood as advising against this resolution. I think it is a perfectly proper resolution, and do not see any objection to it.

On motion of Professor Willams the resolution was referred to the committee on resolutions.

*Principal Hopkins* : Would it not be profitable to shorten the sessions of the institutes and lessen the number? I think there are six sessions now. Why not lessen it to five? It seems to be quite a strain upon the teachers to sit through six sessions of about forty-five minutes each. I have heard a good many complaints, especially from lady teachers.

*Superintendent Draper* : You will bear in mind that we have just been passing through the short days of the year and this is the time of year that you would hear the most of that thing. When you cannot have a teachers' institute but one week in a year, and when it costs as much to hold an institute as it does now, I think we should manage to put in all the time possible during the time we are to-

gether. If necessary, we must make our instructions more interesting.

REPORT OF COMMITTEE ON "CAESAR."

*Principal Farr* : I suppose every principal who saw the November examination in Cæsar will be somewhat interested in the discussion which I hope will follow my report. I may be entirely wrong in my comprehension of what the first Latin examination should be ; but if I am not, it is this, that it should be in its nature and character elementary. It is the first examination in Latin, and much will depend upon the first impression which the pupil gets of the work assigned him to be done at the first examination. Now if it be the object of the Regents' office,—which I know it is not,—to discourage classical scholarship and the study of Latin, I submit that that November examination is right in that line. If it is to encourage scholarship, to lead pupils to take a thorough course in classical training, I think that there will be a spirit of reformation manifested at once. It is an old adage that you can catch more flies with molasses than with vinegar. I want the molasses used. I want the boys and the girls to be attracted to Latin. I can easily see how, if you treat them reasonably, treat them as they ought to be treated, they are going to be attracted to it ; but if you abuse them, they are going to turn their backs in discouragement upon it.

It may not be known to every person here that the last examination in Cæsar, (the first examination that the Regents set for the students commencing Latin) consisted of forty lines in Cæsar, as printed in this pamphlet. Gentlemen and ladies look at it. You cannot see it all at once. There might be something said in extenuation of that provided it did not contain the most difficult portion of the four books of the Gallic War. That first passage, I submit to every classical teacher in the room, is one of the most difficult and most involved passages in the four books of Cæsar.

*A voice* : Indirect narration ?

*Principal Farr* : Lots of it ! Indirect narration from beginning to end. I think I am well enough known to the honorable secretaries here so that they will know that I do not mean anything very serious, and that my bark is a great deal worse than my bite. But it does seem to me that it is time that we understood each other perfectly in regard to this Cæsar examination. If I should turn to



the Cicero examination and ask any person of Latin scholarship to sit down and take both of those examinations, and at the close to tell me which was actually the most difficult, I venture to say that the reply would be that the Cæsar is more difficult. I can do that paper in Cicero in less time than I can the paper in Cæsar. These things ought not to be. This is an elementary examination. It ought, it seems to me in all candor, to be made just what it purports to be.

In order to bring this matter before you, the committee have seen fit to present the following points very briefly for your most earnest candid and thoughtful consideration, by way, not of censure, but a mild form of advice to the officers of the Board of Regents for their future action. If I remember correctly, when my hair was not as gray as it is now, we commenced to discuss this Cæsar question. I remember several gentlemen took part in those discussions, and I remember that there has never been a subject taught in any of the academies that has elicited so much discussion as this same Cæsar. Like Hamlet's Ghost, it will not down. Now I hope that such action will be taken here to-day that this old ghost will be forever killed. Wherever we go it is everlastingly brought before us. Let us finish it to-day.

*First*, we recommend "that the passages selected for translation be short and narrative in style." We want to impress that upon the attention of every member here. If I understand it, that pretty nearly excludes that abomination for the young man, indirect discourse, and I hope that every person here will so understand it. I submit whether it is in accordance with good teaching to set a pupil face to face with a passage exceedingly difficult, a long passage, and show him a large number of credits attached to it. Unless they have a tremendous command over themselves they are going to get nervous and excited and going to make a failure and bad work of what they otherwise would not. For that reason we recommend that those passages be short and more of them.

*Second*, "That the questions upon grammar be confined to forms and the simpler constructions in syntax." Forms, forms, forms, just as many as you want, the more the better. That is what we believe in, in teaching Cæsar, to make them familiar with the etymology of the language. The simpler the constructions the better. I want to emphasize that word *simpler*. There are other examinations to come in which to grind them on syntax. I don't care how much

you grind them in Cicero. I don't care how hard you grind them in Virgil or other portions of the examinations; but be merciful to the young innocents.

*Third*, "That only the most important points in geography and history be considered."

Principal Taylor moved the adoption of the recommendations of the committee. (SECONDED.)

*Principal Bunten*: I would not quite like to see the resolutions adopted just as they are read. I believe most sincerely that a great mistake was made in the November examination in Cæsar. It was a more difficult examination than that in Cicero, where the translation had fifty credits, while that in Cæsar had but twenty-five. But a construction in Cæsar that does not take up the indirect discourse must be very elementary indeed. I would prefer to have that passage stricken from the resolution. The recommendation that the passages be short I believe in; but I do not believe in excluding all indirect discourse.

*Principal Clark*: The resolutions to my mind are entirely what we wish. I further recommend the suggestions of the last gentleman, that we should have at least a little indirect discourse. I would recommend most heartily that we retain a little of it. I think it would be detrimental to throw it out altogether.

It was suggested that very many take simply Cæsar, go no further, and substitute it for three subjects; and that it ought not to be made so easy as to be a temptation to take that and substitute it for other subjects.

*Principal Hunt*, of Troy: I should dislike to see any resolution adopted which would weaken the effect of these examinations. \*

\* \* I don't care whether it is indirect discourse or not. The more grammar the better. We have one year preparatory and one year in Cæsar. Why not do that preparatory work thoroughly, and let the grade of the work continue as it is?

*Professor Burton*, of Rochester: I perhaps ought to hesitate to give advice upon a point of this kind to men who are much better acquainted with preparatory Latin work than I; but as a teacher of Latin in college I feel great interest in the matter, and I sympathize very much with Principal Farr in his suggestion that the elementary work ought not to be too difficult. I also sympathize very strongly,

as every college teacher must, with the suggestion just made. It is very important for college work that grammatical work should be well done in the schools. During the preparatory course the grammatical instruction ought to be thorough and comprehensive; not only etymology but syntax ought to be thoroughly learned. But why do it all at once? I think, with Principal Farr, that in connection with Cæsar the etymology, the forms, ought to be emphasized. Further on there is plenty of time for drill in syntax.

\* \* \* \* \*

*Principal Comstock:* Among other things, I hope there will be no letting down in this matter. Of course this is the first examination. It does not imply though that it covers everything for two years. It would be very difficult for that to be accomplished it seems to me. I find that you have two and a half or three hours for examination in the Regents. You go to the Yale college examination and you are expected to do the same amount of work in one-fourth the time. \*  
\* \* I want to have this instruction in Cæsar kept up just as high as it can be. I believe that there is danger in letting down. I believe that this will go out to the colleges as a recommendation that the examination be lightened a little, and that is a wrong impression for us to send out. If the true record of pupils who receive these diplomas is as stated here by the professor from Cornell yesterday, it is a very excellent record for us to make, and we ought to hold it up.

*Principal Hill:* I do not quite see the reason for making these passages short. It seems to me that translation is one of the principal things to be examined on in Cæsar. A facility in translation indicates a good knowledge of grammar and a good knowledge of the forms also. In my opinion the amount to be translated ought to be increased rather than diminished, and the passages long rather than short. Is not the reason why we want these passages short that we expect the student to be weak in a good many parts of Cæsar, and we don't want to have him fail all in one place and lose a good many credits? It seems to me that the examination in Cæsar should be as severe as any examination we have, if not more so, upon the forms and upon the grammar also. I have never found any portion of Latin so well adapted to the teaching of syntax as Cæsar, so well adapted to the teaching of reading of Latin as Cæsar. For myself I should prefer to make Cæsar the great book for the study of the fundamental principles of the Latin language.



*Principal Keyser* : The purpose of the committee was not to recommend any letting down in the character of our classical diploma. \* \* \* \* The reason why we proposed that the Cæsar examination be simpler was in order that the gradation be more uniform. I think we can stand a little heavier examination in Virgil's Eclogues than we get now, and I think we can stand that better if the examination in Cæsar is not quite so hard.

*Dr. Watkins* : I should like to say a few words in regard to examinations in the classics in a general way. First, with regard to the examination in Cæsar for last November. I will bow my head very willingly to the storm of criticism in regard to the length of the paper. I do not think the examination was especially severe, but it was certainly very much too long. Circumstances which I could explain, but will not, tended in that direction. The examination was too long. We shall hope to amend that in the future.

It has been our aim in making these classical papers to grade them. The best teachers do not sometimes reach their aim in laying out their work in classes. We perhaps have not reached our aim in this work. It has been our aim in the selection of passages to select those that we thought were fair, not including passages very much involved, but somewhat so. We have not dodged them by any means. We have aimed to find those that had indirect discourse in them every time; because we felt that it was just and right to demand that pupils who had read four books in Cæsar and had had proper training should have been given at least the elements of indirect discourse. We have not intended to give involved passages in indirect discourse. If we have done that sometimes we have not done it consciously. It has been a mistake. We have aimed to thoroughly test the pupils, as we thought they should be tested after a two years' course in elementary Latin, in the forms, as far as we thought best. We have aimed to put in the four or five most commonly used irregular verbs that we thought pupils should have mastered at the end of two years' drill in etymology. We have asked for the simpler forms of syntax that we thought after two years' drill in Cæsar ought to be within the knowledge of the pupil. When we reach Cicero we have given more translation and less grammar. We have aimed to give about half the credits in Cicero to translation, and add to that, grammatical work of every kind. We have given more liberty of translation. We have not held so closely to elegant

translation. We have given more latitude in literal translation. In Cicero we have sought a smoother language in translation and we have given more of it, perhaps seventy for translation and thirty for grammar;—thinking that while the grammar has been kept up and there has been advance in the more intricate forms, that more translation should be insisted upon. We have aimed in Virgil to give about the same amount of translation, but to ask more upon prosody, feeling that the teacher could not spend so much time on grammar in Virgil as he could in Cæsar and Cicero. We have always asked some grammatical questions in Virgil, but not so many. Then in the *Æneid* and in the *Eclogues*, (which it seems to me do not compare in importance with the *Æneid* either in length of time or in the matter of culture) we have asked more historical and geographical questions than in either of the other subjects, dwelling also somewhat upon prosody.

I explain this to you in order that you may see the plan we have. We have that plan of gradation. Sometimes, of course, we have stepped outside. We are very glad to have these recommendations. It seems to me it would be a great mistake to omit indirect discourse from Cæsar where it seems naturally to find its place. On the other hand we have this matter to guard very jealously in our office. As one speaker has said, we were very much gratified yesterday at the statement of Prof. White in regard to the work done by pupils who took their entrance at Cornell upon Regents' diplomas. Two years ago we made some inquiry at Cornell in regard to this very matter and we were informed that the boys who entered upon Regents' diplomas did not come up to the point where those who entered upon examination or upon certificate did. We tried to investigate that and wrote to know upon what examination those boys entered. A variety of questions were submitted, which, after great trouble on their part, were answered. We wanted to know why it was that our pupils did not stand better. If there was a cause for it we wanted to know what it was. We have stiffened up that examination a little, I think in consequence of that criticism that came to us practically from Cornell. Now, I think both on account of that stiffening up and on account of the regulation at Cornell admitting upon diplomas only, and not upon single pass-cards, this result has been reached. I should very much regret to see any action by this Conference which would tend towards or suggest a letting down of the standard.

ADJOURNED TO 2 O'CLOCK THIS AFTERNOON.

FRIDAY AFTERNOON.

The report of the treasurer was presented and accepted. The report is as follows:

		December 26th, 1889.
Report of Treasurer of Associated Academic Principals.		
Received for annual dues-	- - - - -	\$40 50
Paid A. J. Llewellyn, Stenographer	- - - - -	15 00
" Janitor fee - - - - -	- - - - -	2 00
" The Academy - - - - -	- - - - -	20 00
		<hr/>
		\$37 00
Balance in Treasury December 26th \$3.50.		

A. C. HILL, Treasurer

GEO. A. BACON, }  
C. T. R. SMITH, } Auditors.  
B. G. CLAPP. }

Principal Taylor presented the following resolutions:

*Resolved*, That it is the sense of this Association that the work of education in the state can be materially strengthened by unifying the various associations, as to time, place and action.

That a committee of three be appointed by the Chair to confer with the other associations to further this action.

After some discussion Principal Graves moved that the resolutions be laid up the table, which motion was seconded and carried.

The committee on nominations presented its report, by Principal Allen, as follows:

*President*—F. H. Cheney, of Kingston.

*Vice-President*—Charles Richards, of Oswego.

*Secretary*—E. R. Payson, of Binghamton.

*Executive Committee*—George A. Bacon, of Syracuse; W. K. Wickes, of Syracuse; and George W. Pye, of Geneva.

On motion of Principal Norris the report of the committee was accepted and adopted.

Principal Verrill moved that the secretary be empowered to cast a ballot, in behalf of the Association, for the candidates named in the report of the committee. (SECONDED AND CARRIED.)

The secretary reported the ballot cast as directed, and the candidates were declared elected.



## DISCUSSION OF "MORAL TRAINING IN SCHOOLS; TO WHAT EXTENT IS THE PRINCIPAL RESPONSIBLE."

Principal Lovell, of Attica, being requested by the Chair to speak upon this subject, said :

I do not know that the question can be answered : What can be done by a principal in moral training in his institution ? There is an individual element, it seems to me, connected with the work of every principal. There is something in his life, there is something in the method of thought, there is something altogether peculiar to him and surrounding him that makes the impression upon the boys who are under his charge. Seems to me that if we can in our classes teach them to learn the truth as it is presented, to learn exactly what is presented, that those things have an influence in teaching what is right and what is wrong in dealing with each other in school and in dealing with each other throughout after life. It sometimes seems to me that, if in the beginnings of teaching geometry we can impress upon the boy that a line is something not simply made upon paper or upon a board, but something that is straight and is as perfect as his machination can create it, that thought followed through all the principles of geometry, exact truth, leads him to the idea of exact truth in his dealings with others. If a school can be governed, (as many a school is governed and as most principals are trying to govern) by the principles of self control, the young man is fitted to go out into life and do his own work in his battle with men. If pupils can be taught to know what is right in dealing with each other and to maintain this principle of right as they recite to the teacher, as they go back and forth, as they come in contact with each other in the recitation rooms, in the buildings, before and after the beginning and closing of the school ; to know that they are not to be conspicuous, to know that there are certain rights which they give up the moment they come upon the school ground which they are entitled to in their own home and upon their own ground ; certain rights and privileges which they are entitled to in their own homes they are not entitled to in the school room,—such boys are fitted, it seems to me, to go out into life and do the work of life. I think that many of the principals will agree with me that if a young man is in training for college, if his training has been conducted upon the right principles, the impression of the principal is made upon the mind of that young man ; and no after work in the college, in the

higher processes of study, will obliterate the impression of the man who has caused him to move along the right lines; and even the after struggles and advancements in the business of life will not change the power that has been brought to bear upon him during the days of his school life under the charge of early teachers. If I can say good-bye to a young man who goes out from the institution of which I have charge, with a feeling that he has obtained in part at least the principles of self control, I am satisfied of his ultimate success in life; satisfied that if he does not become wealthy, or if he does not obtain a reputation as a literary man or a statesman, at least he will do good in the world.

There is always behind every person, it seems to me, some individual, some person. It may be the father or mother at the hearthstone. It may be the friend who has advised him in certain courses in life. And it may be the teacher under whom he has been for two or three or five years. In the years of life as they come to him, the power of a man who has done his duty, the power of a man of strong moral character, will impress itself upon him, and the young man goes out into life feeling that he is working for himself, it is true, but working under the influence of the man or the power behind him, who has been over him during his youthful days.

*Principal Norton, of Oswego:* I came here for the purpose of learning the direction of thought among my co-workers, not to say anything. I would be most happy, therefore, to listen rather than to speak. If by a remark or two I may be able to suggest some ideas, I may be able to inform myself from the remarks of those who speak afterward.

You have heard the story of the man who was about to employ a man to do certain work for him. He first tested that person by asking him to carry some stones across the street. He did so. He carefully took an hour or so piling them on the opposite side. He was then ordered to replace them whence he took them. He did that. Having fulfilled that test his prospective employer was satisfied and employed him. Now I think, gentlemen, that there are very few of us who would be willing to do work of just that character. We are willing to be obedient, and yet we want to see some definite value attached to our work. So when we are teaching Latin and Greek or mathematics, the question will recur to us, of what avail is this? Of what importance ten years from now to the young man? I suppose all of us feel that, after all, this Latin and Greek or anything else that

we may be teaching serves its purpose in developing something higher than mathematics; in developing in the man a power to do. And yet back of that, gentlemen, it seems to me there is something still further. I call to mind a boy who played by my side in my youth, who, when the war broke out, volunteered among the first to go to the scene of that war. He was captured and consigned to Andersonville prison. At a time when men were being exchanged and one of his friends, who he knew would see his father, was saying good bye to him, although he was so emaciated that he could not arise to his feet but sat there facing death, he said to his friend, "Tell father I am not sorry I came." Now, gentlemen, there is an element in that remark that we do not touch every time in teaching Latin,—character. There is an element in all of the work that men are called upon to do that we do not teach in simply teaching any of those subjects. What are the characteristics that make a man successful even in a business way? Not simply self-control. That is the first step. I am glad to hear that voice once more advocating those thoughts that I too have heard in years before. Not simply self-control. That is of its very nature impressive. There must be progress, earnestness, energy, as well as honesty,—requisites for success in our day. Therefore, not only self-control but self-determination, self-direction in its broadest sense, is a thing that we need. Now it seems to me, that we may so make our subject matter a test of character, that we shall gain both the character and the subject matter; that we shall gain both the character and the knowledge. I would like to have frankly stated to me here what objections there can possibly be to having the children in our public schools feel that the public school is primarily not simply a place where they are to learn certain things in the way of knowledge, but a place, where under a watchful and jealous eye, they are to develop a strength which shall make them successful in the highest sense in their future career.

*Principal Clark:* I would like to ask if it is the opinion of the gentlemen here that we should or should not make remarks or addresses upon morals before our pupils, or should endeavor to have our moral training entirely incidental? As an illustration of what I mean I will mention a little incident which occurred long ago when I was a student. I think I knew as much about mischief as any young man. I remember when on one occasion we had distributed the heads of snapping matches around on the floor, and the gentleman who had charge



of the room came in, and every step was resounding and added to our merriment. He, of course, was very much mortified and chagrined and commenced to deliver a harangue upon the subject. Among other things he said it was very naughty and dangerous. This rather provoked merriment than any feeling of regret. Just as he uttered the words, the head master or principal came in and happened to catch the words, and he seemed to be quick enough to see what had been going on. He was not a man of many words. I do not remember of his ever making a speech before his pupils. He simply quietly said that it would be very dangerous for any lad whom he caught doing it. That is all that was said. But I remember, while I was foremost among all the boys in those matters, I did not intend to ever allow him to catch me at it, and he never did. I do not believe there was a boy in the room but what made the same resolution. The point I make is this: Did his demeanor accomplish this result? I want to ask you if we could not accomplish more in that manner than by deliberate addresses and speeches? And I would refer to the subject of profanity. I do not think there is a man here who has not more or less profanity upon his school grounds. In my own school I have tried to get rid of it. I have wondered whether an address on the subject of profanity would be of any value. I would like to ask some of these older gentlemen who have had experience.

*Principal Norris:* The question just asked by Principal Clark has greatly interested me. I have been at work for over four years in a school, partly a boarding school, trying to rectify some wrongs of that kind. I find that it is utterly useless to tell a boy who swears that it is wicked to swear. I have tried a great many other expedients. I have finally found that the best way to reach him is to make it low, ridiculous. I tell him that when an older man hears him swear he simply assumes that he does not know any better, that he is green, that he is, as he calls it, "fresh." I am happy to say with all sincerity that a strong opposition to profanity has so been aroused among our boys. I think one reason it has so been aroused is because of our enthusiastic and well attended prayer meeting every Thursday afternoon. It has so been aroused that my older boys tell me they have not heard a word of profanity on the play-ground for months. I think this is a practical test of the question. My way to get along with them is now more and more to let the boys govern themselves. When a boy does swear out there on the play-ground he is immedi-

ately reproved by a lot of other boys; and that seems to hit the case very well.

*Principal Callahan:* I would say that the influence of such a prayer meeting as I have attended in Principal Norris's class room would have more to do in stopping swearing than any method that I know. There was a deep, strong sentiment of religious feeling pervading it throughout; and I do not believe there is any other way to reach the matter than to arouse that sentiment in a school.

*Principal Capen:* I understood Principal Clark to say that on the occasion he referred to, he and the rest of them resolved never to be caught at it. I would like to ask if that was really the statement; whether he resolved never to be caught at it, whether that was all there was to it? Or whether he resolved not to do it?

*Principal Clark:* I think it is safe to say that we resolved not to do it. The indefinable manner of the man when he said it and the way he looked was a quietus on the whole of us.

*Principal Capen:* I am happily disappointed at the conclusion reached here; because the remark led us to suppose, I am sure, that there was a disposition left on the part of the students to do it, but a still stronger disposition not to be caught at it. I think that there is just where we fail. I believe in this sentiment that was just expressed:—that we should create such an atmosphere in the school-room that there will be a disposition not to do these things, instead of a disposition not to be caught at them.

At an institute in Dutchess county recently I was talking with a principal down on the Hudson. He told me that he had been able to create such an atmosphere in his school, that he could leave the room at any time, and that if any boy was doing anything that he ought not to do, the rest immediately *froze him out*. That was the expression he used. If we can create that feeling, that atmosphere in the school room which is averse to doing anything that is wrong, it is very much better than to go at it in any other way. I believe it can be done. Of course in the lower grades the teacher has to keep his eyes open. I have no sympathy whatever for this espionage and watching of pupils and having them understand that you do not trust them. I believe we should treat young men as young men; lead them to think that we believe in them. It does not make any difference how young they are. By all means have them feel that they come to

school for something else than mere knowledge I am sure that the objections which Professor Norton asked for do not exist. There are no objections, I am sure, in anybody's mind.

*Principal Graves:* The question has been suggested in regard to sermonizing in schools. I think it is a very poor plan indeed to preach sermons in an academy or in any other school as far as that is concerned. I can look back to my academic days and remember very vividly a principal who was in the habit perhaps once or twice a week of giving us a free lecture at the time of chapel exercises in the morning; and I think the school was one of the worst governed schools I have ever known. I believe in a teacher attending to his business just exactly as I would have scholars attend to their business. I can look back to-day over about forty terms of teaching and say that I have never been tardy a minute; and when I can tell a scholar that and tell him that I cannot see how he can possibly have any excuse for tardiness, I have a clincher to my argument. When a principal or teacher tells a student to do a thing, and says that if such a thing is not done such and such a penalty will be inflicted, it is of the utmost importance to see that that penalty is carried out to the letter every time. The school should know very soon that the teacher is in earnest, and that what he says he *always* means. I remember some fifteen years ago when I was teaching a district school that the river near by was frozen over. The ice was perhaps an inch thick. I had many small children in the school and I told them it was not safe for them to go upon the ice, and forbade any student in the school doing so. That very afternoon at intermission, a boy about thirteen years of age, whom I will call Sam, (and, by the way, I had labored with that boy considerably before) persuaded four or five of the little children to go down on the ice at recess. The current was swift; they went down there and did not come back. Of course they all ran a chance of losing their lives. I was considerably stirred up about the matter, and after school that night I went across to the woods and cut some beech whips about four feet long. I cut some half-dozen of them about half as large around as my little finger and brought them down to the school building, tempered them by the fire, and put them away in a cupboard. The next time this fellow Sam came around I made up my mind I had talked all that was necessary. At my request he took off his coat, and I worked at him until I am of the opinion that he made up his mind that he would stop that kind of business. A few



years since, and some ten years later, I met a neatly dressed gentleman, perhaps twenty-one or twenty-two years of age, on the street of an adjoining town. He came up to me, shook hands with me, and told me he was glad to see me. I said, "You have the advantage of me, sir. I do not recognize you." He said, "Do you remember that fellow you whaled so terribly in that district school?" and told me of the time. He said that he believed that there never was anything done to him in his life that did him as much good as that. That may be an exception. But I believe there are times with children of that age when a little force is not a bad thing. I remember some four years ago going into a school where I was told that it never would do in that school for a teacher to lay a hand on a pupil; "These are good children and come from good families and you must use moral suasion every time." I had four or five boys twelve or fourteen years of age who were sometimes disposed to be inattentive at recitation. I put up with it and talked with them about it and sometimes had them stay after school. I talked until I found that talking did not bring about the result I wanted. So one day when those four boys were inattentive during an arithmetic recitation, I walked carelessly around as if I were not noticing anything, and gradually, one by one, I had those fellows by the coat collar and jerked back into their seats in the chapel where they belonged. You never saw a more astonished set of young fellows in your life. After school they wanted to know what I meant by such a proceeding as that. I explained matters to them. They are nice boys today, three of them in college, I think, and I don't think they ever laid it up against me. I believe in a teacher's using a little of that kind of suasion if he cannot get along without it. I cannot. I presume there may be those who can. I presume there are those here who will say this is nonsense, that they have and can get along with such pupils without anything of that sort. But it has worked with me, and for that reason I do not know but I shall follow it as long as I live. I want to say, however, that I do not think I have averaged to lay my hand on a student for the last five years but once or twice a year; but when it is necessary, I stand ready to do it.

*Principal Allen:* This seems to be a sort of experience meeting. I agree with Principal Graves that that kind of moral suasion does do good. But it seems to me we ought to understand the character of the individual pupil. I remember some years ago when I was principal of one of the grammar schools in Rochester that on two or

three occasions we had tried this sort of suasion on a boy, and the teacher brought him up again. I said to the teacher, calling her up to me, "It does not seem to do any good to whip this boy." I had just then read an account of Bronson Alcott's dealing with boys, allowing the pupil to whip the teacher. I said to the teacher, "There is a capital idea." The boy did not hear me. Tommy his name was, not Sam. "It does not do any good to whip Tommy, but I believe that boy has a good deal of heart in him. Now here is an opportunity to try Bronson Alcott's method. You go to Tommy and say, 'It is no use for the principal to whip you. That doesn't do any good, and it doesn't do any good for me to whip you; but somebody ought to be whipped for this misdemeanor.'" She did so, and she presented the ruler to him and said, "Now I want you to whip me." Well, the boy was all cut to pieces. He said he would not do it, he never would strike his teacher. But the teacher insisted upon it, and the boy took the ruler in his hand and he raised the ruler, but before he could strike with it the ruler dropped. She insisted upon that boy whipping her hand. He tried again. He lifted the ruler and struck one blow, and then said to the teacher, "I will take any punishment you want to give me." It was not necessary to discipline that boy from that time until he graduated from the school.

That was not the end of it though. There was a little girl came up. I now thought we had a capital thing; we had just hit it. Lily came up, and she had been up a number of times, and I had whipped Lily; but that did not seem to do any good. I said, "It doesn't do any good for me to whip you. I guess you had better whip me." After talking with her a little while I gave her the ruler, and she put it on well. That was not all of it. She went downstairs at the close of school and told her playmates, "I licked the teacher!" "What teacher?" "Why, Mr. Allen. I licked Mr. Allen." That is all the good it did that child.

The point is we must know somewhat of the character of the individual. Shortly after that Bronson Alcott came to Rochester. He had some friends living in Rochester, patrons of our school. He come over and I told him the story. He was very much interested in Tommy's case. But I said, "I have another case," and I told him about Lily. After I had told my story he said, "Well, don't you suppose that there was some reflex influence?"

*Principal Capen:* I want to tell a little story here of which the gentleman's narrative reminds me, of a physician who was in the

habit of keeping notes. An Irishman applied to him and he made a prescription for him for a certain dose and it cured him. A German came to him with the same malady and he made the same prescription and it killed him. So he put down in his note book, "Such a remedy cures an Irishman but kills a German." So it seems to me it is with reference to this matter. I think it is all nonsense to say that a principal ought not to talk to his school; call it a sermon, if you choose, or a lecture. There is a difference in sermons. A principal who cannot preach a sermon to a school with good effect had better keep still; and a principal who can, let him preach.

*Principal Clark*, of Canandaigua: I was reminded by the gentleman here in his remarks of times more than three score years ago, when we used to see teachers go out into the woods and cut their hickory gads and bring them in and roast them in the ashes and lay them up on the mantel-piece for future use. It brought me back so wonderfully to those times that I supposed we had outgrown more than half a century ago, that it rather harrowed me. That was the common custom then, and any teacher who could not do that—whip the devil around his own half acre—was considered unfit to occupy any place as a teacher. It was an awful sight to sit and see a fellow take off his coat and then take off his vest, and hold up his hands and submit himself to this lashing with those hickory gads. I do not believe, and never did, that it did any good. I know it did not have that effect upon the school at which I was, excepting that we were terribly afraid of that teacher. And in connection with him and an old pastor we had in the place, who said when he came into the house he always wanted to have the boys and girls get behind the door, because he didn't want to be troubled with them, we had a very poor idea of teachers and a very poor idea of ministers. Now I thought we had outgrown that. I believe in working the evil one out of a boy if he has got it in him if you possibly can. I thought when the gentleman mentioned it that it was a very great sin to carry out that doctrine now of going out and cutting rods and bringing them in. If I were going to punish a boy I would take him alone. I never should punish a boy before the school, and yet one says, "The correction must be as public as the offence itself. The offence was committed before the school, and, therefore, he ought to be punished before the school for the example." We do not hang men publicly nowadays.



In my dealing with young men (I never had anything to do with girls), I have found I could do more with fifty or a hundred or two hundred of them together by working up a moral sentiment among them which would enable them to carry out all my measures which I should propose to them and break down a great deal of the evil which I could not correct myself. I used to do that thing in this way, by little familiar talks with them in the morning, sometimes once a week and sometimes two or three times a week, preaching a little sermon to them, if you choose, always having a boy in my mind to illustrate the subject. I found I could control the school in its general management, I could carry out my discipline, always leaving them with a laugh when I left them, unless it was a very serious case; and they would go to their tasks with a great deal of good nature and make up their minds that for that day they would behave themselves, and they would. I did that by a little familiar talk. Put yourself on their level, and so by calling their attention you will find a sentiment growing up on your side. Pretty soon you get the sentiment of the school with you, and you have a power there which you cannot get by any outside demonstration.

I have felt a great many times that some boys wanted a thrashing. But it was not my business to thrash them. One great element in good government is good teaching. Get young men interested in their work and that will get their minds off from their deviltry. If you let things drag in the school-room you have got a hard company to manage; but if you know your business and can interest them day by day in their work, you soon have them on your side, and you will not suffer much from extreme disorder. If you have a case of extreme disorder you will find you have got the great mass of the school on your side to help on any measure you may attempt to carry out.

Of course we all feel that every sin should be punished. Every sin deserves punishment. But who is going to sit in judgment? It is very easy for a scholar to say, "When you were a boy didn't you do so? Is it anything but the boy in me? I mean all right; I am all right at heart; but the devil gets possession of me once in a while and I have to let it out. It is nothing but boyishness. I don't steal and I don't lie." I remember when I was a little fellow, one of these teachers I refer to said to a boy, "You have run away from school and I am going to thrash you. You take my knife and go down to the brook and cut me off just the size whip you want to

be whipped with." He went and brought back a big whip as thick as my thumb at the butt and six feet long. The teacher said, "Do you want that I should punish you with that?" He said, "Yes. I don't propose to be whipped like a little child. If I am going to be whipped I want to be whipped like a young man." That boy turned out to be a magnificent man. He wanted to be treated in a manly way. You go to a young man and say, "I want you to put yourself on an equality with me. I want to treat you like a man and I wish to treat you like a gentleman just as long as you will allow me ; but when you depart from that I shall take away my regard from you."

There is not one boy in ten but what would be a pretty good boy for the sake of keeping on the right side of his teacher.

I say spare the rod. I do not believe like Solomon that you will spoil the child always by taking that course. Spare the rod and put in a little more of your good self into that boy, and make him feel that you are the best friend he has on earth, bring him out, attach him to you, and you will not have any trouble with him. It is a rare thing among our boys, out of a hundred to two hundred and fifty, to have any case which calls for any severe punishment or anything of that sort, year after year.

*Principal Bunten :* I agree most fully with every word of the last speaker. If we could all have only the class of boys to deal with that this principal has I think it would be much easier for all of us. But there is another class of boys that some of us have to deal with. They come from rough homes and the boys themselves are rough. It is often difficult to find anything manly in them to appeal to. The question is, what is to be done with that class of boys? You may try to appeal to their sense of manliness and justice ; but if they don't have it in them, I don't see how you can get good results in that way.

With regard to what has been said about lecturing and sermonizing to schools. I remember a school numbering some three hundred or more of both sexes, where it was the habit of the principal once a week to keep the entire school and give them what he called a lecture upon all sorts of subjects, personal habits, cleanliness, and everything pertaining to the well-being of the pupils under his charge, as he regarded it ; and it was not the worst governed school in the world. That man was at the head of that institution for nearly thirty years, and during all that time it was in admirable condition. I believe that there is a golden mean in this respect. Often-

times a few words from the principal will have a good effect. Of course those occasions should be selected judiciously and what is said should be said in a judicious manner. I do believe that a principal may exercise a great influence upon the children under his charge by occasionally giving them a little talk. If we can cultivate a spirit of personal honor, personal integrity, a feeling that they must be manly, must be honorable and upright in all respects, I believe we can exercise a great influence in developing the character of those children. I am sure that I can look back to the influence of that principal in my own case and in the case of my associates, and see wherein he did us a great deal of good.

*Professor Norton:* I observe that this one bad boy in a hundred who makes difficulty is occupying the whole attention of this body. That in a school of six hundred is only a half-dozen. He is not so numerous as the others. Are we to neglect the great mass of children in our training who try to behave themselves? Are they to receive no impulse from the teacher? Is there to be no direct inspiration from that teacher? Are these principals and these men to expend their strength physically and intellectually and morally upon these few and neglect the many? I take it that the great fault of our public schools to-day is that that bad boy is largely monopolizing the attention and strength of the teachers.

*Principal Flack:* A vast majority, about ninety per cent., of students when they first come into a school are well disposed. They come there for the purpose of study, and are susceptible to moral training. There is perhaps this bad boy and a half-dozen of his fellows who have an inclination from the very outset to do evil. My plan has been to educate that ninety or ninety-five per cent. and make them assist me in controlling those half-dozen bad ones. My experience has been that the vast majority of students have within them something that is susceptible of being taught, the fundamental principles of ethics.

It is a deplorable fact that the few bad students do claim a large amount of our attention. My theory is that they ought to be charged more tuition than the good ones, in justice. But my experience has been that, unless you instil certain principles of ethics and of morals into the whole school, you will find that these bad few will have an influence that will neutralize your own, and they will bring down the others to their own level.



My experience has been that it is possible to create a sentiment among the better students of the school, who always constitute the large majority, that shall be very potent in assisting the faculty in maintaining order. I believe we are to a very great extent responsible for the moral character of our schools. I believe there is a good deal of this matter in precedent. The precedents of an institution, if they are properly established, will go on from year to year and tend to preserve order. If we allow disorder to continue and and certain habits to be formed, certain customs to be established, we will find that they are precedents which are stronger than we are. I have found that if, when a student creates a disorder in a class, I explain to him in particular and to the whole school in general the fact that by his disorder he is taking the time of the teacher away from the rest of the scholars, that he is robbing them of the time they are paying for to be taught, and that he is making himself an element of disorder in their midst, that he understands it. I explain to the school that he is imposing upon the rest of the school and violating their rights by so doing. They understand it, and they see the reason why our rules say that students shall be in their rooms in study hours. I believe, and I have found it so in my experience, that the majority of the schools are susceptible of being taught. When they are taught these principles they understand the reason for it; they understand the reason for the rules that are established; and when they understand it they rise up (I have had them do so) in a body and unanimously take the side of the faculty against the wrong doers.

*Principal Hendrick:* I have a series of resolutions which I would like to read and afterward move their adoption.

*Resolved,* That this conference respectfully suggests to the Board of Regents the desirability of a modification of the present standard for the distribution of the literature fund.

*Resolved,* That the discussion of this subject be a topic of the next holiday conference.

I would say in reference to this first resolution that although it has not been considered here, it does not introduce a new topic. It has been considered this fall at one of the educational meetings. Neither does this suggestion come originally from the conference. It has been considered for a long time, as I am aware, by members and officers of the Board of Regents. There are certain objections to the present method of distributing the literature fund, and yet there

has not been anything suggested to take the place of it. If we are to suggest that something shall be abolished we ought to be able to put in its place something better. The reason why nothing has been done is because nothing better has been able to be found or has been suggested in any practicable way.

The import of the second resolution would be largely or perhaps wholly to shut off any particular debate on any scheme of substitution for the present distribution of this fund. That there is need of discussing this topic there is no doubt. A large number of us feel that the matter of dollars and cents stands out altogether too prominently in the matter of the Regents' examinations. This matter of money ought not to be as prominent as it is.

Now as to substitutes for the present system, it would hardly be fair for me to go on and discuss this matter after I have said that this second resolution really provides for no discussion. But there are certain points which we want to consider when we take this up a year from now ; one of which is, whether or not, while the fact of thirteen weeks' attendance is to be counted, ought not the fact of a whole year's attendance to be also counted, which indicates that a pupil is taking a continued course of study ? And, therefore, the school is doing more work than for mere chance pupils for a term. Also the question whether the general equipment of the school should be taken into consideration. It is a very delicate question, yet it is a question that might well be considered.

This third resolution naturally follows the other two :

*Resolved*, That this conference discourages the publication in school journals of a list of schools under the visitation of the Regents, rated in the order of the number of academic pupils counted in the distribution of the literature fund.

One reason why so much undue prominence is put upon the Regents' examinations is that schools have been so often rated in this way. It is in many respects a fair standard and yet there are respects in which it is not a fair standard. Here may be one of the best academies in the state which does not have the examinations at all ; yet it is under the jurisdiction of the Regents, and they report a certain number of pupils who have come in from other schools. This will rank down somewhere about two hundred and fifty in the list ; and yet every one knows it is one of the first institutions in the state. There may be another institution which stands high among those who know it, and yet it has few Regents' examinations, because the

principal will not teach arithmetic just as he would have to do in order to have them pass the examinations.

I would say that these resolutions are not entirely the product of my own brain. Had they been they might have been a little different in many respects. But they have been discussed by a large number of persons interested in this matter.

The fourth resolution is like this :

*Resolved*, That this conference recognizes as one of the ethics of the profession that for a teacher to advertise the number of pass-cards, certificates and diplomas received and to attempt to rate his school by the number passing the Regents' examinations, is a kind of educational quackery, which brings discredit to the system of Regents examinations and perverts their proper functions.

I would like to move the adoption of the first two resolutions as to the propriety of which I imagine there will be little or no division of the house.

It was moved, seconded and carried that all the resolutions be laid upon the table.

*Dr. Watkins:* May I be allowed a few words in connection with this subject? Principal Hendrick showed me the resolutions which he had presented, and we talked them over. There are some things there I think very well worthy of the consideration of this Association, either at the present time or a year hence. I think positive harm is done to the Regents' examination by the method in which schools are rated as shown by those lists to which he has referred. It has come to me in one way and another that the weak point in our Regents' examination is that the apportionment of money depends upon it. We want to make them examinations which are purely scholastic, and which shall really tend in the direction of the standard of scholarship of the schools. We have talked this over in the Regents' office from time to time, and thought of it a good deal. I would be very glad if the Associated Principals, one by one, in their different places throughout the state during the year would think of this somewhat and form an opinion upon it, and be able to express it at any time to us, either individually at the office or here next year.

The other question that the resolutions have mentioned in regard to the standing of schools as determined by their number in a certain list, which is again based upon the number of pupils they pass or the amount of money which they receive, is brought up against the examinations. It seems to me there are some elements which ought not to come into that question as determining any such list. I



want to call the attention of the principals to a list which might be made. By the way, the Regents have never made that list. They have been sorry that it has been made at all. There is another list which we could make which I believe would show pretty closely what standard of scholarship and what rank each school should take in that list upon the other basis. We do not care to make that; but we should be glad to have the principals, when the next report comes out, (or they can take the old list,) satisfy themselves where upon that list they stand. You will find in the schedules in the back part of the report pertaining to the examinations, the number of pupils claimed and the number of pupils allowed in each of the branches for the examination of that year. For instance, if the Albany high school sends in fifty papers and we have allowed forty-five, there is the standard. Suppose you add up all the papers sent in by the Albany high school in all branches for that year; and then add the number of papers allowed for that number; suppose they have sent in a thousand papers and we have allowed nine hundred and fifty, there is a percentage which shows something, and I think is a much better basis for a standard of scholarship than the number of certificates given.

I simply suggest this to the principals of the schools to look at and consider, as something of a standard of the scholastic work of the schools. Of course if we had reported to us each time the number of pupils who entered the examination and then the number who passed, that might furnish a good basis. Difficulty arises from the fact that many times pupils come in from surrounding schools and the true work done by the school itself is not shown by the number that enter and the number that pass. Hence we have published for two or three years the number claimed and the number allowed as the better basis for a standard of scholarship. I call the attention of the principals to this as a proper measure or standard between the schools, rather than the number of certificates obtained or the money apportioned. I would be glad to know if the principals think we are doing this thing in the best possible manner.

*Principal Callahan:* With all due respect to the suggestions of Secretary Watkins, allow me to say that there are many times when examination papers are sent on where it is exceedingly questionable whether they will be allowed by the State Department or not. Those papers would not be sent on if they were to be rated against the school and great injustice might be done to students. Teachers

would not send on the questionable papers. As it is now there are a great many papers sent on where the teachers do not really expect that they will be allowed, and yet they are allowed. It would not be a fair thing to the schools to rate them by the number of papers which were rejected.

*Dr. Watkins :* I think that can be very easily amended and is amended in one way. Suppose Principal Callahan sends with his papers two or three saying "We send these to you for your consideration. We are doubtful ourselves whether they pass. We would like your judgment. If you do not pass them please return them to us and make no matter of record of it." That, if they were rejected would not make them a basis; it would make them a basis if they were accepted.

*Principal Bunten :* May I ask Dr. Watkins one particular question? How shall we enter the paper that we send as doubtful in our reports?

*Dr. Watkins :* I would suggest in answer to that question the following:—if a principal have one or two papers and is doubtful which he wishes to present, he send them in a letter, asking to have them examined and entered if accepted; and not recorded if not accepted.

On motion of Principal Taylor the Report of the Committee on Resolutions was made a special order for half-past four this afternoon.

#### DISCUSSION ON "TEACHERS' MEETINGS."

*Principal Callahan :* A point upon which I wish information is whether in our schools it is a necessary thing to have a teachers' meeting regularly; and whether it should be a meeting of all the teachers in the district; or whether it should be a teachers' meeting of teachers of certain branches; or whether we should have the meeting divided between the teachers of the high school, the teachers of the grammar school and the teachers of the primary department.

I find a great deal of trouble in a teachers' meeting where a subject comes up which deals with primary work which takes up the whole time. Those in advanced work are not interested in it. The question which I would like to hear answered by the principals is this, how can a teachers' meeting be conducted with profit to all the teachers in the district?

*Principal Taylor* : The practical advantage of this work is a matter that I have been working at for years.

I have tried the form of having all together monthly; I have tried the plan of having all together weekly. The result of my experience, in the past few years in which I have had experience, has led to the following plan this year. I think I can commend it as the best plan that I have met with thus far. The work this year has arranged itself in the form of four teachers' meetings, the work being divided into four groups,—the academic teachers, the senior, junior, and primary teachers. The teachers of music meet once a week; the drawing teachers meet me once a week; the other four departments meet me once a week. At the close of the school we spend half or three-quarters of an hour in discussing subjects of vital importance to the well being of our school. In this work there is much practical advantage in the line of work and of discipline, helping the teachers to know better what is wanted, and affording opportunities for discussion. I can heartily commend that plan and that line of work.

*Principal Fuller* : I would not think well of the system of my teachers meeting me once a week; not oftener than once a month. It would be too much of a task for teachers under my supervision to come a long distance to the Central School building. Furthermore, I am not sure that it would be of any advantage to them, to the school, or to myself. I have not been in the habit of holding teachers' meetings oftener than once a month unless special circumstances seemed to require it. At times, (perhaps three or four times in the course of a year,) I have a general meeting of all the teachers. We meet together, discuss the school as a whole, our course of study, how it is working, and hear suggestions as to changes. The course of study in a graded school is of such a character that no part can be changed without affecting the other parts. It is a system of wheels, and no wheel can be displaced or thrown out of gear without affecting the work of the entire machinery. So that upon questions of that character I bring all the teachers together, usually towards the latter part of the school year when the question comes up as to our course of study for the ensuing year. The question is asked, perhaps, "What has your experience during the last year taught you with reference to the defects, if it has taught you that there are any such defects, in our course of study?" Teachers are called upon individually to express their views about the course of study in that grade. "What changes would you suggest?" The teachers understand at the com-



mencement of the year that they will be called upon for an answer to these questions some time towards the close, and consequently they think the matter over and whenever these questions come up, they are qualified to speak. If at any time I think I discover a weakness in the working of the primary department, or there are special suggestions I want to impress upon the primary teachers, I call a meeting of those primary teachers. So with regard to the secondary teachers. I do not believe in introducing any more machinery or formality than is absolutely necessary into the conduct of our graded schools.

*Principal Clark:* In my first school after I finished my college course we had ten teachers, and I established a faculty meeting every Monday evening. I did it not because I saw any need of it, but because I thought the dignity of the situation demanded it. As the years went by the meetings grew less and less frequent; and although I have been only four or five years at it, I have none now and I have not had any in three months. I do not mean to say that I would never have any, but I must confess that the real need of them does not appear.

The Chairman presented as members of the special committee on educational matters the following names:

Principal Smith, of Lansingburg; Principal Cheney, of Kingston; Ex-Principal Hawkins, of Albany; Principal Whitney, of Ogdensburg; Principal Clapp, of Fulton; Principal Hill, of Havana; and Principal Diamond, of Dansville.

The report of the committee on resolutions was at this point presented and read, as follows:

*Resolved,* First, that the use of the text books in geometry should be supplemented by original and inventive work.

Second, That as the Regents' diplomas do not cover entrance to all courses in colleges we recommend the adoption of the new diplomas considered at this meeting.

Third, That it is the opinion of this conference that two or three examinations as the schools require should be supplied by the Regents and that it is feasible to give but partial examinations in November and March.

Fourth, That it is the sense of this body that two inspectors of schools be provided by the Board of Regents.

Fifth, That it is entirely practical to thoroughly teach the elements of physics and chemistry in the academic schools of the State and that we recommend the encouragement of individual laboratory work.

Sixth, That the common school system of the State demands increased appropriations for the support of training classes and that the work of such classes should cover two terms a year of at least sixteen weeks each.

Seventh, That it is not desirable to decrease the severity of the Cæsar examination.

On motion of Principal Comstock the resolutions "*as they stand*" were adopted, as a whole.

ADJOURNED TO 7.30 O'CLOCK P.M.

FRIDAY EVENING.

*The Chairman :* The Executive Committee has arranged for a discussion this evening upon one of the subjects mentioned in the circular sent out to principals and which seemed to interest a great many of them, namely, *How shall we arouse an interest in reading good literature?* As the president of the Association, knowing that Principal Keyser has very successfully given a good deal of attention during the past year to this topic, I invite him to open the discussion.

*Principal Keyser :* Mr. President : I have not much to say in regard to this subject. I hope to draw out the Secretary of the Board of Regents who I believe is particularly interested. Nevertheless it is a subject in which I personally have a very deep interest, because I think that a boy or girl who goes out from our schools with a love of reading is well educated. I wish I had any successful expedient which would arouse in the minds of the great majority of pupils, an interest in good literature; but I have no such expedient. That work has to be to a large extent individual. A method which will work with one boy or girl will not work with another. Nevertheless there are several principles which I have found to be quite reasonably successful. One is this: I always aim in recommending works of literature to pupils who come to me, to recommend something in the line in which I find the pupil has a natural interest. We want to avail ourselves of all natural advantages in arousing a love for literature, and wherever there is any natural taste in the mind of the pupil, I find it very useful to guide him and cultivate that taste. Poetry is a very excellent thing for study in our literature classes; but I have found that the majority of young people will not read poetry for pleasure. I talked very enthusiastically at one time of the beauties of *Paradise Lost*, and one of my bright boys got *Paradise Lost* out of the library the next Friday afternoon. He had it renewed once or twice, and then he brought it back and said, "It was pretty tough work, Professor; but I am glad I stuck it through." I noticed that he did not draw another work of imaginative literature out of the library for a year after. Then, noticing his taste, I recommended *Motley's*

Rise of the Dutch Republic to him. That seemed to exactly fit him. He read it with great enthusiasm; and he seems to have acquired a real taste for historical reading.

I find that I sometimes aim a little too low for a pupil. A pupil came to my library a few months ago for a book. He was a young boy from the academic grade, and I looked out a book that I thought would be suitable for him, but he did not seem to be inclined to take it. He looked around the library awhile, and took down one of Froude's Short Studies on Great Subjects. It was a nice looking book, and I concluded that was the reason he selected it. But when he brought it back the next week I knew that that book hit him; and when he followed that book with Hammerton's Intellectual Life and a couple of Arthur Help's Essays, I knew that boy's tastes, and I have never since had any difficulty in suiting him with just the book he wants.

An expedient I have used with considerable success is the Regents' special subjects. We have a table in the school-room with an encyclopædia and some other works of reference upon it, and whenever we have a special topic in the Regents' examination, I put upon the table all the works we have in the library on that special subject and encourage the pupils to take them whenever they please. I find I get a good deal of reading done in this way, although I am a little suspicious that there is a little "cram" about it, and that it is not so much a stimulus to the love of literature as it might be. On this table I also put the books which bear especially on the subjects we have in any particular class, hoping that the pupils dipping into them now and then may acquire a desire to read them.

However, an expedient which I adopted last term has been the most successful of anything I have ever tried. I got up what I called an elementary reading course. I made a list of forty volumes, one for each month of the academic course, and had it printed in this little paper in as compact form as I could, and gave it out to the pupils as a reading course. I took a great deal of pains to explain to them that it was not a course of study, but that it was a course in pleasant literature, a course which I expected they would find pleasant and at the same time profitable. I was a little ashamed of myself when I read it over to see how very elementary it was. But the pupils who would read works which were more solid than those, I could lead on without trouble. I did not need any reading course for those pupils. It was aimed at the average boy and average girl.



I tried to put on this list of forty books not a single book that pupils of that age would find uninteresting, so that when they had read this list of forty books they would have had a considerable course of literature, some of which at least was substantially valuable, and none of which they found hard reading. If I am to judge from the amount of interest shown in the course thus far, it is an expedient which promises to prove fruitful. I offer a diploma or certificate at the end of the course, which we shall confer at our anniversary exercises the same as any other diploma, and I think that will have a little stimulating effect in causing pupils to persevere who otherwise would not. The list is not complete; in the first place because it had to be easy; in the second place, it was conditioned by the books that we had in our library and by the notions prevalent in the school regarding certain books. Somebody who had read a certain volume said it was not a good book and that idea spread abroad. Some books that I should otherwise have put in I left out because I knew they would fail. There were certain books I put in, because there was a general opinion among the pupils that those were interesting books. I have a few copies of this course here which I would be glad to give to anyone who is interested in it. But a course would have to be made according to the library and according to circumstances. But the scheme I have found to be a good one.

*Dr. McKay:* We have found that a course of reading has worked very successfully in our school. We have tried it now for four or five years. We have a course of reading which we have published in our catalogue the same as our courses of study. It is understood by the members of the school that they are expected to read during their course a certain percentage of the books there named. In addition to that and to encourage it and to cultivate this love for reading, we work our literature classes in that direction. The advanced classes have literature every day in the week; critical study of authors. The B and C classes have two periods a week in literature; and the D class, the lowest class, one period in a week. The teachers of literature in those classes make this the basis of their composition work, direct them in their readings, by observations on the books they have read in the class, making that the basis of composition work. Many of these compositions are of course read in class and selections are read from them in our morning exercises as a stimulus to good work in that direction. We have found that this has worked very successfully and has to a certain extent increased the

love for literature. I think the pupils, after they go from the school, through the influence of this course, go further and read more books than they would had they not been directed in it at first by a course of reading. When they go to the library they don't know what books they want; they don't know what books to read. Here is a selection of books made for them; that is, a number of books in each year in the course. They can make their selection from that. It directs them in their reading. The course of reading is made out with reference to the different tastes of different pupils. Of course all would not read the same books; but there is a choice.

*Secretary Dewey:* I would like to find out from the principals who are here to-night how many are using any portion of the fifty thousand dollars a year appropriated by the state for district libraries. That is a bit of information that Judge Draper and I would particularly like just at this time. We have some legislation on hand in regard to that. I am sorry he is not present.

*Principal Hunt, of Troy:* It is unfortunate that in some cities that library fund reaches the general fund, and so goes to pay teachers' wages; and unfortunately we are so situated that we do not get any of that money at all. In Troy the money for the library fund goes into the general fund. I do not know but that is also true in some other cities.

*Secretary Dewey:* The point I am after, Mr. Chairman, is this:—The appropriation was made with the idea of providing the best reading for the citizens of this state. If you are going to do anything substantial in this most important phase of education, you want the best books. It is not enough to undertake to develop interest with such books as you have at your hand. If there are better books, if there are more interesting books, the principals ought to have them. It is like asking a man to do the finest kind of work with inferior tools. The state made this appropriation years ago with the idea that it would help very materially in supplying the best books throughout the state. That idea was copied in some seventeen other states, and it has been pointed to as a failure in almost all of the states. My own feeling in regard to it is that the law which allows that money, appropriated for books, to be used for teachers' wages or incidental expenses is all wrong; it is a perversion of the proper use. The state will pay money enough to buy these other things, but not out of the money that is supplied for books. All of

that fifty thousand dollars is simply and wholly for the purpose of purchasing books.

*Mr. Bardeen:* \* \* \* It seems to me that when this question of library money comes before the legislature it should be accompanied by two very positive provisions: one that the money for all the districts of the town be united for a district library; and another that all purchases be made from a list of books furnished by the Regents or by the Department. You all know what subscription books are and what the agents are. You know how difficult it is to get rid of an agent, and how often you buy a book you do not want in order to dispatch him. When a trustee can rid himself of an agent with other people's money you see what sort of books you will get in the schools.

*Principal Hill:* The earliest memory I have of reading is from books that were from one of the libraries belonging to a district in the country, in an old log school house which I attended when a boy. I know in that community the library was a great institution and was read by all of the inhabitants. These books of travel that have been referred to made a great impression upon me. I think that the reason those libraries went out of use at that time was the fact that the neighborhood read all the books, there were no new ones added, and so they came to disuse. I know that was the case with the library to which I have referred. It seems to me there should be some way in which these libraries could be renewed or changed from time to time.

*Prof. Williams:* I think that this matter of inculcating a love of good literature commences somewhat earlier than with the academies. I have been thinking of a scene that impressed me very vividly a little over two years ago; and it impressed me more vividly I think than anything else I saw in all those weeks of visiting the German schools. I can see the place now, in one of the citizens' schools in Leipsic, where there was a teacher who had been lamed (I think in the Franco-Prussian war). He was teaching a class reading from somewhat extended selections which were put in the hands of the children. It was not put there merely for reading; it was a part of their language and literature. The thing which was being read was some part of Schiller, and the beauty of the literature and the enthusiasm which it excited in those young children, (not more than ten years of age,) impressed itself most vividly upon me; and I wished that



the teachers of reading in our elementary schools in this country could see the manner in which this poor lame fellow was teaching and impressing the personality of one of the great German litterateurs upon the children of the citizens of Leipsic. If we could have that way of teaching reading instead of mere perfunctory pronunciation of words, with more or less indistinctness of enunciation; if we could have that teaching of reading which secured on the part of those children a thorough imaginative realization of the sentiments they were uttering, and something of the force and beauty of the language they were using, (and that can be secured only, of course, through proper teaching,) I think that very much could be done in the promotion of the literary tastes before young people enter our high schools and academies.

*Secretary Dewey:* Some of you have suggested that the Secretary could make a list of books. I would not dare make a list of books for libraries or schools. I should want any amount of assistance in making one.

The point I want to make is this: if you can contrive in your schools to teach your pupils to read intelligently, and have instilled into their minds notions of the importance of an upright life, you have turned out men of good education, because you have given them the means with which to get an education. If you turn them out knowing every definition in grammar, and if they can make every demonstration in geometry and they yet come out with no taste for reading and no ability to read, they have not an education and you have not done your duty. That is my opinion in regard to that, and I believe, if you look into it squarely, you will agree with me that that is the problem which is before us.

You, as academic principals, reach the great mass of the people who ought to be reached by this work. The colleges do not get at them. You must do this work. The teaching of reading means to teach the boy or girl to hold before his eyes a piece of paper and have the emotions and the thoughts of the author reproduced in his own mind.

The question about pauses long enough to count one at a comma and so long at a period has nothing to do with the case. Mere elocution is good enough; I am much interested in that, but it is not all.

I say it is the work of the schools to teach the boys and girls to read, and it is about all we are going to accomplish in the public schools. The most we can hope for is to teach them the way to read

intelligently. If we do that and then supply them, through the public libraries, with the best books out of the enormous mass, they will go on and get a good education.

If the university or the Regents' office or the state librarian undertake this central work, undertake to help you in the selection of books, to provide loan libraries for you, or to afford any other assistance, you have got to play a very important part in helping us in reaching the individuals that need it.

The great problem of the hour in the selection of books is to select the best books.

Mr. Bardeen made a suggestion which has been made from a variety of sources. Judge Draper came to the same conclusion, and I think every thoughtful man will come to that conclusion, that some central authority, giving a great deal of time to it, taking a great deal of advice, should prepare a list that will be furnished, every book upon which shall be desirable and a good book of high grade. Then let the schools select from that list.

At my suggestion last year inquiries were sent out to forty or fifty libraries. Judge Draper and I came to the clear conclusion that there was an enormous work to be done there; and he said that the work ought to be done in the state library because it is library work. The intention was not solely to supply school libraries; it was intended to supply general reading for the public and good libraries for the schools. He is ready to ask the legislature to devote this whole thing to the purpose for which it was intended. At the same time he wants to supply the schools with distinctly school libraries. We are quite agreed as to what ought to be done. If that plan can be carried through, so that we will get on our statute books a satisfactory law for the formation of public libraries, so that we shall get this money used for that purpose, and shall make arrangements so that the best selections of books can be brought before all those who have to do with it, something may be accomplished. And it is not only those who have libraries under their charge; but if a principal has no library, he ought to be the man of all others who would see the good that may be accomplished in this way.

After discussion, Principal Hunt offered the following:

*Resolved*, That it is the sense of the Associated Academic Principals of the State of New York that the efforts of the Secretary of the Regents in the line of providing libraries and library facilities for the schools of the state are heartily approved.

[SECONDED AND CARRIED.]

A. C. HILL, *Secretary*.

The following principals, and ex-principals eligible to membership under the constitution, are members of the Associated Academic Principals, and were present at the Holiday Conference of 1889 :

John G. Allen, Principal, Free Academy, Rochester.  
 S. D. Arms, Principal, Union School, Gilbertsville.  
 George A. Bacon, Ex-Principal, Syracuse, N. Y.  
 Leland C. Ball, Principal, Union School, Brookfield.  
 A. G. Benedict, Principal, Houghton Seminary, Clinton.  
 N. L. Benham, Principal, Union School, Niagara Falls.  
 N. P. Browning, Ex-Principal, Buffalo.  
 George E. Bullis, Principal, Union School, Manlius.  
 W. E. Bunten, Principal, Ulster Academy, Rondout.  
 Henry White Callahan, Principal, Union Academy, Penn Yan.  
 F. S. Capen, Principal, Normal School, New Paltz.  
 W. G. Carmer, Principal, Union School, Dolgeville.  
 Mary E. Catton, Principal, Union School, Perry.  
 J. W. Chandler, Principal, Academy, Jordan.  
 Francis J. Cheney, Principal, Academy, Kingston.  
 B. G. Clapp, Principal, Union School, Fulton.  
 Henry G. Clarke, Principal, Classical Union School, Palmyra.  
 Noah T. Clarke, Ex-Principal, Canandaigua.  
 I. N. Clements, Principal, Seminary, Cazenovia.  
 W. H. Coats, Principal, Union School, Elizabethtown.  
 Strong Comstock, Principal, Union School, Walton.  
 O. P. Conant, Ex-Principal, 743 Broadway, New York.  
 F. W. Crumb, Principal, Union School, North Brookfield.  
 Elisha Curtis, Principal, Academy, Sodus.  
 F. J. Diamond, Principal, Union School, Dansville.  
 H. P. Emerson, Principal, High School, Buffalo.  
 D. M. Estee, Principal, Union School, Canisteo.  
 J. A. Estee, Principal, Union School, Addison.  
 I. N. Failor, Principal, Union School, Baldwinsville.  
 D. C. Farr, Principal, Union School, Glens Falls.  
 Alexander D. Filer.  
 Arthur H. Flack, Principal, Academy, Claverack.  
 W. S. Flint, Principal, Union School, Fort Covington.  
 Gardner Fuller, Principal, Union School, Batavia.  
 H. A. Gaylord, Principal, Union Academy, Belleville.  
 Willis D. Graves, Principal, Academy, Delhi.  
 E. W. Griffith, Principal, Union School, Norwich.  
 E. J. Hamilton, Ex-Principal, Oswego.  
 G. R. Hammond, Principal, Starkey Seminary, Eddytown.  
 E. S. Harris, Principal, Union School, Cambridge.  
 Charles E. Hawkins, Ex-Principal, Albany.  
 H. H. Hawkins, Principal, Union School, Deposit.  
 Welland Hendrick, Principal, Union School, Saratoga.  
 A. C. Hill, Principal, Cook Academy, Havana.



J. H. Hoose, Principal, Normal School, Cortland.  
L. R. Hopkins, Principal, Union School, Weedsport.  
Robert W. Hughes, Principal, Griffith Institute, Springville.  
P. M. Hull, Principal, Union School, Waverly.  
Leigh R. Hunt, Principal, High School, Troy.  
J. H. Kelley, Principal, Union School, Whitehall.  
R. S. Keyser, Principal, Union School, Middleburgh.  
N. G. Kingsley, Principal, Union School, Palatine Bridge.  
M. H. Kinsley, Principal, Union School, Massena.  
Albert Leonard, Principal, Union School, Dunkirk.  
H. H. Loomis, Principal, Union School, Waterford.  
H. M. Lovell, Principal, Free Academy, Elmira.  
Thomas B. Lovell, Principal, Union School, Attica.  
E. F. McDonald, Principal, Union School, Norwood.  
R. A. McDonald, Principal, Union School, Sandy Creek.  
John S. McKay, Principal, Franklin Academy, Malone.  
A. C. McLachlan, Principal, Mynderse Academy, Seneca Falls.  
C. D. McLean, Principal, State Normal School, Brockport.  
J. E. Massee, Ex-Principal, Saratoga Springs.  
H. F. Miner, Principal, Union School, Skaneateles.  
Warren D. More, Principal, Academy, Mexico.  
F. N. Moulton, Principal.  
J. C. Norris, Principal, Academy, Canandaigua.  
A. W. Norton, Professor, State Normal School, Oswego.  
F. B. Palmer, Principal, Normal School, Fredonia.  
E. A. Parks, Principal, Parker Union School, Clarence.  
Eliot R. Payson, Principal, High School, Binghamton.  
E. J. Peck, Principal, Free Academy, Owego.  
W. M. Pierce, Principal, Union School, Mayville.  
D. A. Preston, Principal, Union School, Castile.  
George W. Pye, Principal, Classical and Union School, Geneva.  
O. B. Rhodes, Principal Collegiate Institute, Adams.  
C. W. Richards, Principal, High School, Oswego.  
J. G. Riggs, Principal, Yates Union School, Chittenango.  
R. R. Rogers, Principal, High School, Jamestown.  
M. T. Scudder, Principal, Free Academy, Rome.  
A. M. Seekell, Principal, Academy, Union Springs.  
J. H. Selden, Principal, Union School, Tonawanda.  
F. D. Shaver, Principal, High School, Watertown.  
E. A. Sheldon, Principal, State Normal School, Oswego.  
Robert Simpson, Principal, Union School, Phoenix.  
C. T. R. Smith, Principal, Academy, Lansingburgh.  
F. R. Smith, Ex-Principal, Norwood.  
Irving B. Smith, Principal, Union School, Warsaw.  
S. McKay Smith, Principal, Union School, East Syracuse.  
H. H. Snell, Principal, Union School, Cobleskill.  
T. B. Stowell, Principal, State Normal School, Potsdam.  
A. N. Taylor, Principal, Union School, Westfield,

H. L. Taylor, Principal, Union School, Canandaigua.  
 F. S. Thorpe, Principal, Free Academy, Forestville.  
 J. N. Tilden, Principal, Academy, Peekskill.  
 W. H. Truesdale, Principal, Union School, Mohawk.  
 Charles H. Verrill, Principal, Delaware Literary Institute, Franklin  
 A. B. Watkins, Ex-Principal, Albany.  
 A. White, Ex-Principal, Cazenovia.  
 Barney Whitney, Ex-Principal, Ogdensburg.  
 T. C. Wilber, Principal, Union School, Sidney.  
 Professor S. G. Williams, Ex-Principal, Ithaca.  
 A. M. Wright, Principal, Union School, Waterville.

The following visitors registered their names and attended the Conference :

C. W. Bardeen, Editor "School Bulletin," Syracuse.  
 A. B. Blodgett, Superintendent of Schools, Syracuse.  
 Professor L. C. Cooley.  
 H. S. Dawson, New York.  
 Melvil Dewey, Secretary Board of Regents, Albany.  
 G. F. Dickson, Westfield.  
 Mrs. J. A. Estee, Addison.  
 George Fenton, General Agent A. S. Barnes & Co., Broadalbin.  
 Professor A. G. Hopkins, Hamilton College, Clinton.  
 Frederick H. Howard, Instructor in Friend's School, Providence, R. I.  
 Clayton Jennings, Teacher in Public School, Manlius.  
 F. W. Jennings, Principal, Union School, Oneida.  
 E. N. Jones, Superintendent of Schools, Saratoga Springs.  
 Franklin Jones, Preble.  
 S. H. Kimpton, New York.  
 O. C. Kinyon, Teacher Physics, Syracuse.  
 O. B. Kipp, No. 3 School, Saratoga Springs.  
 E. B. Knapp, School Commissioner, Skaneateles.  
 W. H. Lennon, Brockport.  
 E. E. McDowell, Fabius.  
 Spencer C. Newberry, Professor, Cornell University, Ithaca.  
 Grace I. Norton, Easton.  
 A. D. Perkins, Agent for C. W. Bardeen, Syracuse.  
 Lucy M. Salmon, Vassar College, Poughkeepsie.  
 E. D. Scribner, Principal, High School, Parish.  
 F. R. Smith, Ex-Principal, Norwood.  
 W. C. Tift, Poultney, Vt.  
 Horatio S. White, Professor, Cornell University, Ithaca.  
 E. D. Wiles, Onondaga Valley.

# THE ACADEMY:

## *A JOURNAL OF SECONDARY EDUCATION*

DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND  
ACADEMIC DEPARTMENTS

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### *SPECIAL CONFERENCE OF THE MASSACHUSETTS HIGH SCHOOL MASTERS, HELD IN BOSTON, JANUARY 18, 1890.*

In accordance with a call signed by Messrs. John Tetlow, William H. Lambert, Frank A. Hill, Ray Greene Huling, and George E. Gay, and dated Jan. 10, some fifty gentlemen and ladies assembled in the chapel of Boston University (12 Somerset St.). The object of the meeting was to consider the need of superior normal instruction for persons who wish to become teachers in high schools.

The meeting was composed mainly of high school principals, though a few others were present. Following is a nearly complete list of those in attendance:

Marion E. H. Barrows, Hopedale.  
A. G. Boyden, Bridgewater.  
Wm. F. Bradbury, Cambridge.  
W. R. Butler, Reading.  
Elmer H. Capen, President of Tufts  
College.  
George H. Carey, Lynn.  
P. J. Chase, East Douglas.  
Emily S. Clark, Roslindale.  
Charles M. Clay, Roxbury.  
F. F. Coburn, Lowell.  
J. H. Davis, Somerville.  
Hon. John W. Dickinson, Newton.

George R. Dwelly, Watertown.  
Frederick T. Farnsworth, Brookline.  
Arthur E. Ford, Clinton.  
George E. Gay, Malden.  
Arthur L. Goodrich, Salem.  
J. N. Ham, Lexington.  
E. R. Harding, Winthrop.  
Frank A. Hill, Cambridge.  
Sumner W. Hines, Manchester.  
C. A. Holbrook, Peabody.  
Frank S. Hotaling, Framingham.  
Ray Greene Huling, New Bedford.  
Clarence E. Kelley, Haverhill.



Henry H. Kendall, Walpole.  
 C. H. Kilborn, Boston.  
 J. C. Knowlton, Lincoln.  
 M. C. Lamprey, Easton.  
 James W. MacDonald, Stoneham.  
 George H. Martin, Lynn.  
 H. B. Nevens, North Attleboro.  
 John O. Norris, Charlestown.  
 John A. O'Keefe, Lynn.  
 Edward Parker, Brockton.  
 G. W. Parsons, Winthrop.

G. F. Partridge, Boston.  
 A. K. Potter, Middleboro.  
 John T. Prince, Newtonville.  
 A. S. Roe, Worcester.  
 George W. Rollins, Boston.  
 E. D. Russell, Waltham.  
 Fred L. Sawyer, Marblehead.  
 John Tetlow, Boston.  
 A. E. Tuttle, Amesbury.  
 George A. Walton, Newton.  
 A. E. Winship, Somerville.

The meeting was called to order by Mr. John Tetlow of Boston, who announced the object of the meeting in an address of which the following is a summary.

Mr. Tetlow briefly reviewed the argument of a paper on "The Duty of the Colleges to make Provision for the Training of Teachers for the Secondary Schools," read by Professor Sewall before the "New England Association of Colleges and Preparatory Schools"\* last October, and of the discussion which followed the reading of the paper. That discussion, he said, had already borne fruit; for a member of the Association, who was also a member of the Massachusetts Board of Education, had at a recent meeting of that Board, urged the establishment of a normal school of advanced grade, distinct from those now existing, as the best means of meeting the demand for such professional training. Moreover, a sub-committee, with President Capen of Tufts College as Chairman, had been appointed to consider and report upon the subject; and that sub-committee had held a formal conference, and framed a tentative scheme, which would be recommended for adoption at the next stated meeting of the Board.

Mr. Tetlow then read, for the information of the meeting, parts of a personal letter received from President Capen, in which the scheme referred to was outlined. In brief, it proposed the establishment, under state control, in the city of Boston, of a High Normal School, by means of an appropriation to be applied for at the present session of the legislature.

As the initiative had thus been taken by the State Board of Education, it would not be becoming in the masters of high schools to forestall the action of that Board; but they might, with special propriety, come to its support with such suggestions as their experience

\* The "Official Report of the New England Association of Colleges and Preparatory Schools" appeared in the November, 1889, issue of *THE ACADEMY*.

qualified them to make, and with offers of such service as they, better than any other class of persons, could render. The speaker hoped, therefore, that at this meeting some such questions would be discussed as the following: What should be the outfit of a high school teacher for the practice of his profession? Do the existing normal schools furnish this outfit? If not, should it be furnished through the establishment of chairs of pedagogy in the colleges and universities, or through the establishment of a distinct school? If through the latter, what should be the main features of such a school? Further, when these and related questions had been fully discussed, he hoped that a communication of some sort, either in the form of resolutions, or of an address, would be sent to the Board of Education, conveying appreciative recognition of the service which that Board had already rendered in the matter under consideration, and expressing a wish on the part of the masters to co-operate in any way in which they could be of service.

Mr. Tetlow then called upon the audience to choose a presiding officer. The choice fell upon Mr. John O. Norris of Charlestown, and he assumed the chair. Mr. Ray Greene Huling of New Bedford was elected secretary.

After the organization had thus been effected, Mr. Tetlow was called upon by the Chairman to discuss the first of the questions just suggested, with reference to the outfit which the high school teacher should possess before entering upon the work of his profession. His remarks were substantially as follows:

Foremost among the qualifications of the high school teacher should be scholarship,—not necessarily profound scholarship, but rather scholarliness. This, in most cases, comes as the natural result of prolonged contact with liberal studies during the formative period of life,—in other words, as the result of a collegiate course of study. Moreover, it is the high school teacher's task to prepare his pupils for a liberal course of training, and therefore he should himself have passed through that training. A collegiate course of training, then, or its equivalent, should be regarded as an indispensable qualification for high school work.

But this alone is not sufficient. There should be superadded professional training. This should include: instruction in the "history of education; in the philosophy of education, involving study of the mind as related to the body, the development of the mind, the value of the different studies, and their effects on the growing mind; in the

art of teaching, including the application of psychological principles and the use of methods; and the practice of free examination and discussion by teacher and pupils together of all the most obscure and difficult problems which confront the teacher." To these elements of professional training, as stated by Professor Sewall, I should add, some preliminary practice in teaching under the eye of acknowledged masters in the art.

Opportunities for such professional training are not now open to college graduates. The existing normal schools do not meet the demand, for the reason that they necessarily adapt their instruction to the relatively untrained minds of their actual pupils. This is not said in disparagement of normal schools. Those schools are doing admirably the work for which they were designed; but, under existing conditions, they do not attract college graduates, because they do not adequately meet their needs.

The next speaker was Mr. Ray Greene Huling, of New Bedford, who discussed the question whether the existing normal schools furnish the preparation needed by high school teachers.

He alluded to the noble work which the normal schools have undoubtedly done for elementary education and declared them invaluable to the state. As to their deficiencies, he felt himself ill-prepared to make intelligent criticism, because of lack of familiarity with their practical workings. From an examination of the printed catalogues he saw that the four years' courses made provision on paper, for nearly or quite all of the professional instruction which seemed to Professor Sewall and President Adams to be requisite. But even in these there was one evident lack. No provision was made for practice in teaching high school subjects to pupils of the high school age under expert supervision. The very important fact should be noted, however, that these courses do not attract the future high school teachers. College graduates seldom attend the normal schools and those who do, complain that these institutions seem dreary to them. Nor is the cause far to seek. Men and women of liberal training cannot with satisfaction pursue studies side by side with high school graduates or even pupils fresh from the grammar schools. It is plain, therefore, that some other agency must be employed to prepare high school teachers than the normal schools which now exist. This fact was not left to the high school masters to point out; the normal teachers were the first to observe and to declare it. In proof of this, Mr. Huling read the following resolution which was adopted by the



National Normal School Association in 1872, having been reported by a committee chosen for the purpose a year before:

*"Resolved*, That in every state there should be established, according to its population and resources, one or more normal schools or colleges of a high order, for the special training of teachers for high schools, for elementary normal schools, and for the preparation of superintendents of schools for cities and towns."

The speaker also referred to the fact that as early as fifteen years ago the Massachusetts Board of Education had considered this question, and that Secretary White in his annual report had recommended action something like that now proposed by the committee of the Board. He congratulated the high school masters that all parties to the case seemed now to be approaching unanimity of opinion on the main question. This secured, the details could readily be adjusted.

Hon. John W. Dickinson, Secretary of the Massachusetts Board of Education, was called upon by the Chairman.

Mr. Dickinson expressed pleasure in the movement by the high school masters of the state in favor of securing more efficient means for their professional training. He said the subject is an important one on account of the relations which the high schools hold to the elementary schools below them, and because the high schools are the scientific schools of our system.

The Board of Education, some years ago, made a careful examination of the subject. Three plans were considered for furnishing adequate normal instruction for those who were to become instructors in high schools.

One plan provided for a high normal school for training graduates of the colleges, or for those who had passed through a course of studies at one of the existing normal schools. Another plan proposed the reorganizing of one of the present normal schools for advanced instruction. A third plan recommended the establishment of a four years' course of studies in each of the present schools. The last was considered the most feasible, and was adopted. Each of the five state normal schools is now organized for a four years' course of professional study which if completed will train the teacher for his work in the high school.

The normal schools were established to teach the history of education, and the principles and methods of teaching. This is their appropriate work. All grades of teachers should be subject to the

same professional training. An elementary teacher cannot teach the elements of science intelligently without a knowledge of scientific methods, nor can a scientific teacher teach the sciences intelligently without a knowledge of elementary methods. This is due to the relations that elementary holds to scientific knowledge.

A normal school or college would be radically defective in our commonwealth if it did not provide for a study of all grades of teaching belonging to our system of schools.

To secure the highest and best ends that the schools are capable of producing, all grades from the primary to the high school should be taught by teachers of sound learning and a thorough pedagogical training. When there is a public demand for such teachers, the graduates of our higher institutions of learning will not hesitate to enter any school where such training can be obtained.

Mr. George R. Dwelly, principal of the high school at Watertown, wished to indicate his pleasure at hearing of the plan proposed by President Capen's committee. He strongly hoped that it would be followed by the Board. He had been in a position to observe how much the lower schools had been benefitted by the normal schools. Let us have the same element of improvement in high school work. For his own part he would prefer a professional school like those of law and medicine, but the proposed plan seems all that is now attainable.

Mr. A. L. Goodrich, principal of the Salem High School, agreed that the normal schools have done good work for schools of lower grade than the high school. He wished to say no word against that. His experience had been, on the contrary, an evidence in their favor. He had found that, with the normal stamp upon her, a candidate for a position in the high school is a formidable person. The public and the average committeeman make no distinction. A normal school graduate is, they think, fitted to teach anything anywhere! To this practical difficulty he desired to call attention. He hoped the proposed school would succeed in educating the public to distinguish.

Mr. George E. Gay, principal of the Malden High School (who was the initiator of the conference) spoke upon the last question suggested by Mr. Tetlow,—What should be the main features of such a school as is needed? His views were as follows:

An ideal normal school, of the grade proposed, must look in two directions. Its work must correspond to the attainments of its students, and it must be adapted to the demands made upon its grad-

uates. Since the attainments of its students and the work of its graduates are both essentially different from those of our established normal schools, the school must differ in many respects from existing schools.

Three essential features of a high normal school present themselves at once. It must give the principles of teaching which underlie successful high school work; it must give practice in teaching high school studies; and it must give helpful criticism and suggestion.

These general features secured, the details will fall readily into place.

To secure these there must be instructors, a practice school, and opportunity for the observation of the best methods of instruction now employed in high school work.

All of these would be secured if the school should be organized under the best instructors in connection with some existing high school of the first grade. Let us suppose, as a possibility, that some suburban city should wish to secure the location of such a school. It would give up to the Board of Education the control of its whole high school instruction. The normal school and high school could then use the same building. The teachers of the normal school would have charge of departments in the high school, and give some of the regular instruction to the high school classes, other teachers being employed as necessary to provide for its complete curriculum. The students of the normal school would take classes in the high school for a time, and conduct them under the direction of their teachers. The students would often visit other high schools to learn and compare the methods of many teachers. Provision would be made for advanced instruction in high school studies, and for reviews of such branches as the pupils wish to prepare to teach.

The only essential element in the plan is the union of the two schools under one management, in order that there may be unity of method and common interests.

Such a plan has several evident advantages. It is cheap, it is complete, it is practicable. Its disadvantages I will leave for others to point out.

Mr. M. C. Lamprey, Principal of the Easton High School said:

There was a general agreement that some method of improving the qualifications of applicants for positions in high schools was an imperative necessity. Every speaker had confessed to a lack of



special training when he first entered upon his work as a teacher, and to a sense of partial failure as he reviewed his early efforts. He presumed that all had at times experienced some such feeling as was expressed by a celebrated French oculist, who, when congratulated on the skill he had attained in his profession, remarked somewhat sadly, "Yes, but I have spoiled a bushel of eyes in gaining it." Now what we all desire with equal earnestness is some practical method of enabling those who are to take up high school work to avoid the mistakes which we confess to have made in the first years of our work. Normal schools, as conducted at present, are confessedly inadequate to furnish the needed preparation. Not long since he asked a young man who had taken a four year's normal course instead of going to college, if he did not think he had made a mistake. "Not if I am to continue grammar school work," he answered; "but for high school work, I am sure the college course would furnish the better training." Three methods were proposed. The best of our normal schools might be raised to the dignity of a normal college, and set apart as a special preparatory school for those who wish to take up high school work. A school of pedagogy might be established with a right to confer degrees. Better than either of these plans would be the establishment of chairs of pedagogy in the colleges. Family tradition or denominational bias were potent influences in turning the steps of our most ambitious young men to the college, and they could not be diverted by any attraction which the normal school of high grade could hold out. Now these are the young men we must have in the school room; but the college has not given them the requisite training in pedagogy. This it will do, if the demand is made with sufficient urgency. The special school would require one or two years of additional preparation which many could hardly afford, and which he thought necessary. He repelled the assertion of one speaker that such could be crowded out of the school room. He had no objection to the establishment of a special school, but predicted that the result would be to compel the colleges to give their graduates more adequate preparation for school work. Optional studies in pedagogy during the last two years of a college course will meet the emergency which we have met to discuss.

Mr. Frederick T. Farnsworth, Principal of the Brookline High School, said that, in his judgment, based partly on remarks made by several college presidents at the meeting of the N. E. Association of Colleges and Preparatory Schools, held recently in Boston, the

chances of success in getting an appropriation from the Legislature to establish a school such as the one proposed are much greater than the probability of the establishment by the colleges of chairs of pedagogy. He added further, that however capable the normal schools as at present constituted may be, or under a sufficient demand might become, to prepare would-be high school teachers for their work, if, as seems apparent, college graduates do not, and in all probability will not, patronize them, a High Normal School seems to be a necessity. He also expressed the hope that the gentlemen who had called this meeting had ready some plan by which the masters of Massachusetts high schools could further the efforts of the State Board of Education looking towards the establishment of a school for the purpose proposed.

Mr. J. W. MacDonald, Principal of the Stoneham High School, said that he could not refrain from expressing his pleasure at the course things had taken, and his hearty approval of the object of this meeting. It was a movement he had long hoped to see, and one that had been too long delayed. Personally he believed that the recommendation of President Capen, so ably endorsed by Mr. Tetlow, is the right one, namely a separate normal college. He did not believe that the work could be done, or that it would be well to have it done, in the present normal schools. He knew of no pedagogic principle, and he had made some study of that science, that would justify putting into the same classes scholars of very different mental attainments. Such a course would be as injurious to the pupils of the lower attainments as to those of the higher. It would not merely be putting graduates of colleges into classes with graduates of high schools, but with pupils whose qualifications were those only of grammar schools.

He did not believe either that the colleges could accomplish what is desired by establishing chairs of pedagogy, or ought to attempt it. They have their distinct mission, namely, to implant a broad and deep scholarship. To divert their attention from this would be unfortunate. All the colleges could reasonably be expected to do is to adapt their methods of teaching to scientific principles, leaving it for those students who intend to teach, to study the philosophy of those methods at a professional school. He thought that those who believed that the demands could be met by the establishment of chairs of pedagogy in colleges, were unintentionally belittling the profession of the teacher. No one dreamed for a moment that

the demands of a medical, legal, or theological training could be met in this way, and the inference is that they regard professional training for teaching as insignificant. The advocates of this device, therefore, seemed to the speaker to fail to comprehend the extent and importance of such professional knowledge.

He thought the plan presented by Mr. Tetlow the right plan, but he would go further. It was a much to be regretted fact that too many of the graduates of normal schools relapsed under the test of actual teaching. To prevent these relapses as far as possible, he would have the new normal college hold its grip upon its students a while after their real teaching began. To do this, he would have the course one of four years, one of which should call for attendance as resident students, just as the plan advocated by Mr. Tetlow proposed; the other three to be spent as non-resident students engaged in teaching and pursuing a course of studies of which their actual methods in teaching would form a part. At the end of this time, having satisfied all demands through annual or semi-annual examinations, and shown that their methods of teaching conform to sound principles, they would receive an appropriate degree.

In answer to the argument that this would tend to discourage poor young men and women from entering the profession, he said that as electricity tends to take the paths of least resistance, so the obstacles to entering the medical and legal professions, deflected a great many young people who were poor in more than one sense, into the more accessible work of teaching; and if a little resistance coil could be inserted, he thought the result would be wholesome. He fully endorsed the utterances of Mr. Tetlow and Mr. Huling on this point.

Mr. J. A. O'Keefe, Principal of the Lynn High School, spoke as follows:

*Mr. Chairman:—*

The illustration offered by Mr. MacDonald is not one which will add strength to his position. He favors making it more difficult for the young man to become a teacher, on the ground that, at present, the profession is one of the "lines of least resistance"; and then he adds that if it hadn't been so, he would, probably, not have become a teacher himself. Now, I should be very sorry to see any such pedagogical requirements set up as would deprive us of teachers like Mr. MacDonald.



The teaching profession cannot afford, by ill considered action, to shut out the moneyless young man of brains. I certainly agree with Mr. Tetlow in believing that the school system should not be regarded as a means of pensioning impecunious graduates; we must discuss the subject keeping in view solely the welfare of the schools themselves. And it is on this ground that I should fear the result of adding a protracted normal course to the four years spent in college. There would be too much danger of driving talent to other professions.

A normal course of one year would, undoubtedly, supplement the Bachelor's course with an element of the utmost importance for success in the school-room,—namely, a knowledge of the history and principles of pedagogy, with some practical experience in the management of classes,—and would not, I think, discourage many. If, in addition, we could endow this course with a certain number of state scholarships approximating in amount those awarded at Harvard College, and assignable to graduates of our colleges whose record morally, mentally and physically had been high, nothing more could be desired: unquestionably, the state would be amply repaid by the increased efficiency in the schools.

Personally, I should deplore any action on our part that indicated a readiness to rest content with pedagogical departments in the universities. I fear that we should simply get theory,—too often, perhaps, out of touch with school-room practice. Chairs of pedagogy are desirable: but we want something more than fine lectures how to teach,—we need to have the young man or woman put face to face with the actual work under the eye of competent critics.

President Elmer H. Capen, of Tufts College, a member of the Massachusetts Board of Education, spoke of the earnest consideration which the Board was now giving to the subject of the present discussion, and outlined the plan (to which Mr. Tetlow had previously alluded) which had commended itself most favorably to a committee of that body after careful examination of the matter. He thanked the gentlemen who had spoken for their suggestions. Their opinions and the strong feeling of the High Schools Masters in the case would certainly have weight with the Board.

Mr. George H. Martin, Agent of the State Board of Education, was called upon and responded as follows:—

That the subject of furnishing professional training to the teachers of the secondary schools should be attracting attention is a most hopeful sign.

In considering the plan to establish a chair of pedagogy in the college the question arises whether the teaching in the other departments of the colleges would correspond with and reinforce the theoretical instruction in the department of pedagogy. If not, which would determine the work of the graduate teacher, the precept or the example?

Concerning the existing normal schools,—what they could do to prepare college graduates for high schools cannot be determined by what they have done. They have already sent out graduates of their own who are doing successful high school work, comparing favorably with graduates from other institutions, and they can do more if the demand is made upon them. No pressure has been brought to bear upon candidates for high school positions to force them to secure a normal training, as is the case with lower grade teachers. Were such pressure brought to bear the existing normal schools would be found to have ample facilities not only for theoretical instruction in the science and art of teaching, but for illustrating method in handling all grades of pupils in all the subjects required to be taught in the public schools. Nothing less than this will suffice to properly equip the high school teacher, and a new and special school would be successful only as it followed existing precedents.

It is said that college graduates would feel uncomfortable in the association with less mature and less learned students. This objection touches only details of administration. Sincere seekers after truth have never found any part of the present normal school work degrading because of its littleness. Indeed the problems of primary instruction are the very ones which they have been most earnest to grapple with, because most unfamiliar.

Mr. A. S. Roe, Principal of the Worcester High School, spoke as follows:

I came to listen, rather than to talk. I have heard much that is valuable, but I should be very slow to agree to any scheme which would considerably prolong the period of preparation. Already we have a long preparatory course, followed by the four years of college. To add a still longer course will, it seems to me, work hardship for some. Nor would I like to take any action which would tend to bar out any poor young man. Many of us have in mind the favorite instructors of years ago, and, quite likely, were we to remember correctly, we should find the most of them parties who knew what it was to work hard for everything they had gained. The majority of the

teachers present did not come to their places quite inexperienced. We gained our preparation in small schools at a dollar a day and boarded ourselves. I would hesitate, also, in furthering any plan which would require a particular stamp upon the would-be teacher. Surely, few of us would care to have our own children prepared in that ideal school which we have heard set forth. One seldom likes to be experimented upon. We prefer to have others undergo the trial. I have known a meritorious child to be made ill by the well-meant efforts of the tyro to sharpen her own wits at the expense of the school. The young man in college has it in his power to observe and to profit by the good qualities of his instructors. It is said of Prof. Frieze, at Ann Arbor, that it was his custom so to direct his pupils as to send out annually a large number of admirably equipped teachers, whose influence has long been conspicuous in the schools of Michigan. I have now in mind a young man, just from college, and he is doing most excellent work. He entered college with a purpose and he made all his college life tend towards a teacher's profession. He noted the ways of those whose example he would emulate and he has succeeded. I would unqualifiedly approve of any effort to make the acquirement of teaching preparation in college possible.

Mr. Huling remarked that the fear expressed by one or two speakers that the establishment of such a high normal school would shut out deserving teachers who could not afford the extended preparation involved, seemed to him groundless. Normal schools had now been established fifty years; yet multitudes of teachers without normal training are elected to elementary schools every year. School committees will continue to select the best teachers they can find, from whatever preparation they come.

Messrs. Norris and MacDonald followed with similar views. Several of the speakers previously named offered additional remarks.

Mr. C. M. Clay, Head Master of the Roxbury High School, suggested the appointment of a committee to prepare and report resolutions which should embody the sentiment of the meeting.

On motion of Mr. Gay, the Chair was requested to appoint a Committee on Resolutions. He named for that purpose Messrs. Gay, Bradbury, Goodrich, Roe and Kelley.

Subsequently, on motion of Mr. Tetlow, a committee was appointed by the Chair, with full power in all respects, to consider the matter



of superior normal instruction for persons wishing to become high school teachers, and to take such action as should seem best. Messrs. Tetlow, Gay, MacDonald, O'Keefe and Lambert were constituted this committee.

Mr. A. K. Potter, Principal of the Middleboro High School, continued the discussion as follows:

As one of the few who have endeavored to obtain normal training after graduation from college, I would not in the slightest degree disparage the work of our normal schools. But the undeniable service they may do a college graduate seems to me to be obtained by the sacrifice of too much time. The course of study in these schools is planned with reference to the needs of the large majority of their students, and much of the work does seem childish and trivial to one accustomed to more mature college classes. Nor can I believe, with a previous speaker, that any possible extension of existing schools will satisfy the want. They are not, in spirit or method, professional schools comparable with our schools of law, medicine or theology, nor can they be raised to the necessary standard and at the same time continue their present work. On the other hand, a high normal school or normal college might do much toward elevating our work to the dignity of a true profession and might attract many who are now repelled by the fact that teaching is so often a last resort for those unable to spend longer time in preparation for a profession.

Mr. Fred L. Sawyer, Principal of the Marblehead High School, expressed his sympathy with the spirit of the meeting.

I wish to express my appreciation of the proposed movement to establish a high grade normal school in the city of Boston. It seems to me that it would be very desirable, if such a school should be established, to provide an appropriate summer course for the benefit of teachers who already hold positions and desire such training as the school might afford. I think such a school would be well patronized by ambitious young teachers who could not well afford to resign a good position for a full year's course. The school could thus be a means of scattering the best ideas and methods of teaching among those that would not otherwise be reached. I should like such a course myself.

Dr. John T. Prince, Agent of the State Board of Education, by request, explained briefly the requirements for teachers of secondary schools in Germany, showing that the work of preparation was prac-

tical as well as theoretical. In the seminaries connected with the university courses in pedagogy there are discussions and frequently practice in actual teaching, followed by criticisms by fellow students and by the Professor. Independent of the degree examination, there is a state examination of candidates in which much professional knowledge is required. Before a permanent appointment, there is also required one year of actual teaching in a high school under the direction and guidance of an experienced teacher.

Mr. Gay, for the Committee on Resolutions, reported that instead of expressing the sentiment of the meeting in the form of resolutions, it had been thought best to address a letter to the Massachusetts Board of Education. The letter, as reported by the committee, was then adopted, paragraph by paragraph, without a dissenting voice. It is as follows:

*To the Massachusetts Board of Education:*

The High School Masters of the State, in convention assembled, desire to express their gratification in learning that you have under consideration a proposition looking to the establishment of a High Normal School. We believe that such a school would be of great benefit to the entire school system.

In connection with this expression, we respectfully submit the following suggestions as worthy of your consideration:

1. Its pupils should be those who have completed a course of study equivalent to that required for the degree of Bachelor of Arts.
2. Its work should include the study of the History of Education, the Philosophy of Education, the Art of Teaching, and practice in teaching under expert supervision the branches required to be taught in the public high schools of the state.

Immediately after the adoption of this address, the meeting adjourned. It was marked throughout by heartiness of feeling and unanimity of judgment on the main subject of discussion. The addresses made were unstudied expressions of the convictions of the several speakers, and gained force from the successful experience which they were known to represent.

RAY GREENE HULING, Secretary.

## *AN EXPERIMENT IN TEACHING ELEMENTARY SCIENCE.*

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JOHN B. DAISH, LATE OF THE WASHINGTON, (D. C.,) HIGH SCHOOL.

Writers on the theory and art of teaching are practically agreed on the objects to be kept in view in teaching elementary science. The leading educators of the day believe that in the curriculum of our schools there is a place for science, that there is a function for this branch of knowledge to perform. Part of this work is the training of the senses, more particularly the eye; the ear and the touch should also be cultivated. Quick perception, active discrimination, accurate judgment, comparison of data, arrangement—all are processes which it is the part of elementary science to instil in the mind of the pupil. He should acquire facility in forming hypotheses, shrewdness in testing them, ease in eliminating errors and in applying the means of verification and readiness to suspend judgment where real doubt exists. These objects the teacher of elementary science should ever keep before him.

As our educators are agreed on the purposes of elementary science, so they concur in the method to be pursued to obtain the best results. A quotation from one of the highest authorities but expresses the general consensus: "It is becoming more generally accepted every day by good teachers \* \* \* that the best teaching is given in the laboratory rather than in the lecture room. It is not merely by seeing experiments tried, but by trying them, that the properties of objects, their structure and organization are best to be learned."

There can be no doubt of the exact truth of this statement; experience has shown that what is here mentioned is the best method of instruction in Natural Science.

While this is a generally accepted truth, the active teacher, the teacher who not only reads but applies what he reads to his every day work, finds that he is hindered by circumstances and the lack of time and apparatus. I am referring to the teacher who uses home-made apparatus, if there be no funds available to make the necessary purchases. This difficulty is far more common than is gener-

†Fitch; Lectures on Teaching: Page 374.



ally supposed. One who is well qualified to express an opinion on this point puts the matter thus : "The science teacher in the public schools appears to be in a state of mind which might be described as hopeless. He knows that it is idle to look for well equipped laboratories in the public schools. He knows, also, that even if he could hope for laboratories and apparatus, he certainly can never expect a course of study which will permit of sufficient time for laboratory work."† What is here stated in regard to our public schools is frequently true of the private institutions of learning.

These two quotations, one by an Englishman, the other by an American, are indicative of what the science teacher wishes to do but is unable to accomplish. He would often follow out the accepted ideal to the very letter. He is often ruled (much against his will) by the latter circumstance. The difficulty is not a new one; it has often been discussed before. The only plea for this paper is the discussion of the question "Is it not possible to have original work, when a laboratory is wanting? Is there no substitute for apparatus? Are we to use recitation alone because we are unable to have well-equipped laboratories?" The writer believes that there is a partial substitute; he does not however pretend that there is anything that completely fills the place of a laboratory. However when all efforts to give the pupil laboratory work prove fruitless there is another resource.

In a large high school there was tried in the past year a somewhat novel experiment. Each pupil had in the first year of the course in Natural Science received instruction by lectures in Physical Geography and Physiology. The study of Physics was prescribed for the second year; the course in this branch consisted of one lecture per week in the laboratory, and three hours of class recitation from one of the best text books on the subject. (Gage : Elements of Physics.) It was found that after the first interest which is always awakened in the pupils beginning a study, there was a danger of the classes lapsing into that state where a study loses its hold on the pupil; he wearies of the accuracies of the statements, proven only by the dictum of the author or teacher. This might have been avoided had it been possible to introduce laboratory work, but the want of time to say nothing of teaching force and apparatus prevented this. It is mathematically impossible to give 250

†John F. Woodhull in the "Journal of Education."

pupils in six divisions, with only four hours per week to devote to a study in school, any individual laboratory work. This fact, that the pupils had begun to lose interest, had ceased to apply the energy to the study which a natural science merits and demands, was the reason for essaying a project by which an enthusiasm, not in Physics alone but in all the branches of science might be created.

The plan was to ask all the students, boys and girls alike, to meet once a week for an hour's study in any branch of science that might be of interest to the members. This meeting which was called the "Science Seminary," held its sessions on Tuesday afternoon after school had closed. A seminary is not a new educational factor, but its use in secondary education is, I believe, the first ever attempted. The presiding officer, "Director," was one of the teachers of Physics. The honors of the secretary's office were assigned to different persons at each meeting; of other officers there was no necessity. The attendance was at first surprisingly large; often as many as 250 were present; later, however, no more than thirty were in the room where so many had been wont to congregate.

Papers chosen at first by the director, later by the pupils and approved by the director, were read by the pupils at each meeting. These covered a large range of topics; almost any subject with a scientific bearing was decided suitable. Many original productions, often of no small value, were submitted by the members, whose average age, it should be said, was sixteen. In the following list one can see the characteristics of the papers read.

Those in *italics* are the results of original work and research; in SMALL CAPS were chosen by the director; those in brevier, by far the larger number, were brought to the director for his approval.

"ATOMIC WORLDS AND THEIR MOTIONS."

"COMMON SENSE AND THE WEATHER."

"*Helen Keller.*"

"Diamonds."

"THE MARCH OF PRACTICAL SCIENCE."

"THE THEORY OF THE SUN'S COMPOSITION."

"Sub-marine boats"

"Electrical oddities."

"Happy accidents."

"Esquimo sewing tools."

"Bark hunters of Bolivia."

"A few remarks on the magnetic circuit."

"SOMETHING ELECTRICITY IS DOING."

"*Telegraphic experiences.*"

"*Coal.*"

"Review of 'One hundred proofs that the earth is not a globe.'"

"Velocity of electricity."

"Light House on St. Catharine's Island."

"Wonders of the sea."

"Thimbles and thimble makers."

"Petroleum in Russia."

At each meeting, besides the two or three papers read, there were given the answers to questions propounded to a committee, whose *personell* was continually changing. This committee consisted generally of three appointed by the director. Space does not allow the writer to give any of the questions submitted; they can, however, for the present purpose be divided into two classes: descriptions of some instrument or substance, as the Heliograph and Creosote; and second, explanations of some popular superstition, as "Does sleeping in the moonlight produce insanity?" Not infrequently discussions arose concerning the answer submitted by the committee. If the explanation seemed to any one inadequate or not clear, there was no hesitancy in saying so. On several occasions the members found themselves divided into sides and debated the subject with earnestness.

At several meetings curious objects were exhibited. Once a hasty review of the development of the frog was given, and the tad-pole, of which some of the members seemed never to have heard, was examined by those present. Liclee, the Chinese fruit, was brought in by one of the members of the seminary, and several were given an opportunity to sample it.

The program was twice varied; distinguished persons were invited to speak in an informal manner before the seminary on their specialties. The two subjects considered were the weather and natural gas. The first subject was discussed by a gentleman who acknowledges himself to be the original "probabilities"; the second subject by one who has made a complete study of that article, which is so revolutionizing our industrial methods. On these occasions the members were free to ask any questions which might come to them; if any point was not brought out clearly, a note was sent to the lecturer asking for a fuller explanation. This variation from the regular plan served to give a pleasing change; in it there was an



impetus for the pupils to take up some one subject and thoroughly study it.

In looking over the life of this body, one familiar with its history seeks to know its results, to find out its value as an educational method. The writer believes the scheme to be a most advantageous one; that it is worthy of trial in any secondary school, whether there is a laboratory or not, and that it will well repay any effort to make it a success. The beneficial results may be seen in that the members learned how to read a paper, how to present a subject, how to express themselves with clearness and force; and this was learned not by rules laid down in a manual of elocution, but by practical experience. Frequently as many as a dozen had something to say at a meeting. There was no limit to the time a speaker might consume in speaking, so that the members felt free to express themselves; in general, rules of all kinds were avoided. It was found also, that the members took a greater interest in science and its advancement. They branched out of that particular phase of science in which they happened to be studying, and strove to get some idea of all the sciences. They sought to learn of the advance of science either in theory or practice. It has been ascertained that the members read more scientific works and were able to read newspapers and magazines more intelligently than formerly. They searched the "Scientific American" and periodicals of that class for new inventions or theories to explain a phenomenon and were not satisfied until they had mastered the subject. They had a desire to know about matters of scientific importance and if they found anything too deep for them they endeavored to sound it by studying other authorities. They became aware of and utilized the scientific method of work. They learned to search things to the bottom, to cast aside the dross and consider the bare scientific fact, to tell a true hypothesis from an impossible or improbable one.

These four results—learning how to present papers, reading more of science, and acquiring the scientific method of work lead to the one object of teaching, or better, the objects of teaching, expressed in one word—to make the pupils *think*. All teaching ends in this; all efforts should be aimed directly at this one thing for on this all else depends. The pupil having once acquired the ability to think, to consider, to reason, to pass judgment and you have the secret of his education exposed. It is on this account that the writer attributes so much value to the Science Seminary. It was not a pleas-

ure meeting nor a machine to raise the standard of scholarship; it proved a powerful engine to give a large amount of general information and a more powerful means of causing the pupil to think and think independently.

The experiment was a most suggestive one. It showed that at least some of the training we get from the study of the sciences can be obtained in another way than in a laboratory. It is not to be supposed that the writer would ever advocate the abandonment of the individual laboratory work for an institution like the one described. Those powers of observation, of induction, of memory, all developed by laboratory work, can be cultivated in the way described above. In the Seminary the slight element of controversy, which often arose, served to whet the powers of observation and inquiry. It should be remembered that under voluntary attendance such an organization will always draw its members chiefly from the better class of pupils, and that the better class will reap the greater share of the benefit. Those who have a natural aptitude for the subject are the ones most often present. It will not attract those who are not attracted by the ordinary methods. Those who think the subject "horrid" or "hard" do not find time to attend the meetings and consequently do not receive any of the benefits. Fortunately this class, of which I speak, is small; I would not have any one understand that the Seminary is a means of educating dilatory students as a whole, though it not infrequently will awaken energy in the pupil. In general, its results are divided among the various classes of students; as in other matters some will be greatly benefited while others reached by no means.

Believing as we do in the objects of teaching elementary science and the method of best securing that training, yet hindered by the want of time and apparatus from carrying out our wishes, it behooves us to try a plan whereby we can achieve the same results in a way that is available; many of the benefits derived from laboratory work can, the writer believes, be reaped in some such arrangement as was tried in the Science Seminary.

## *ENGLISH IN PREPARATORY SCHOOLS.*

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The subject of English in the preparatory school has been approached heretofore almost wholly from the standpoint of what ought to be, rather than of what does exist. There has been much of excellent theory, but this has been based principally upon the experience in preparatory schools, and not upon the results of secondary training as judged by college standards. It is true that Prof. A. S. Hill, of Harvard, in a magazine article since republished with other essays,\* arraigned the schools severely for their methods and their results. The scathing criticism will be remembered by all; and, while its principal suggestions had been in force some years in many of the best public schools, the article was of far reaching influence. Since that time, also, there has been a great advance in the attention paid to the mother tongue, so that much of the criticism would not be so true now as it was seven years ago.

But the questions still come, "What has been accomplished, and what is neglected to-day in English preparatory training?" "What fault, if any, might a college instructor reasonably find with English training in the fitting schools?" With these in view, an investigation was undertaken among the freshmen of Cornell University, and the results are here given. The manner of making the investigation was as follows. Each student was requested to fill out a blank, containing certain questions on his preparatory training. The questions included: place of preparation; number of terms devoted to English grammar, rhetoric, and text-book English literature; number of terms essays were required, and number required each term; English authors studied critically, with or without annotated editions; English poetry, history, essays, fiction read, in or out of school. Every precaution was taken to obtain accurate results. Students were informed that the questions had nothing to do with their standing in the University, and each question was carefully explained, so that answers should be based upon no misunderstanding. The questions cover the preparatory course only. While the same en-

\* Our English, Harper Bros., 1889.



trance examination in English is required of all students, the results given are limited to those in Arts, Philosophy, Letters, and Science courses. For convenience also, only a certain number of the papers were selected, although such examination of the others was made as to indicate that the papers chosen fairly represent the whole class. The separation into two classes is to facilitate comparison between the secondary schools of New York and those of other states. The numbers in the table indicate per cents.

NUMBER OF TERMS.	NEW YORK.					OTHER STATES.				
	None	1-3	4-6	7-9	10-12	None	1-3	4-6	7-9	10-12
English Grammar	10	38	26	16	8	15	45	5	10	25
Rhetoric	24	72	4			20	65	15		
English Literature (text-book)	52	48				35	65			
English Authors studied	60					45				
Essays read	50					45				
History read	66					60				

It is evident from the table that text-book study of English is not wanting. A very small number report no study of English grammar in the fitting school. But even these may be fairly supposed to have had one or two years of this study in the grammar school. While it is well known, therefore, that most students show in their written work many purely grammatical mistakes, it can not be placed to the charge of the amount of time given to the subject. One, or both, of two conclusions must be drawn: either the kind of teaching is not best adapted to the subject; or ability to write well does not depend on the teaching of text-book English grammar. Probably both conclusions are true in some degree. Great improvement may undoubtedly be made in the method of presenting that bugbear of the curriculum—English grammar. It seems clear to the writer, that the best method of language study is the comparative, and that the subject will never be rightly taught, until it is presented in its historical relations. When present forms of speech are presented as the results of gradual development, and the reasons for that development clearly shown, there will be less difficulty in making English grammar interesting and profitable.

It may be said of rhetoric, and text-book English literature also, that each is sufficiently represented in the preparatory course. On an average, more than half the students from our secondary schools have studied both subjects from one to three terms. The memorizing of rhetoric rules on the one hand, or of facts of literary biogra-

phy on the other, have had their full share of attention, and can not be blamed for lack of literary taste, or inability to write simple, clear English. This is emphasized because, when lack of preparation is urged, these studies are pointed to with pride, as a sufficient answer to the criticism.

The first marked deficiency noted in the reports concerns the study of English authors—the direct study of literature. Special care was taken that reports should be accurate on this point. Study of English authors was made to include the actual and careful study of masterpieces in English poetry and prose, whether with or without annotated editions. A plain distinction was made between studying masterpieces, and merely reading books of selections, containing only small portions of great works. The answers show that about half had no such study of any kind. Others reported study of one or two plays of Shakespeare, or of poems of Milton, Goldsmith, or Longfellow.

It may be said emphatically, therefore, that one great need of preparatory training is the direct study of English literature. Nothing can ever take the place of this, or begin to give the same results in forming literary taste. Two suggestions, however, are important. Prose should have a place in such study by the side of poetry. Nor is this difficult. Without attempting technical analysis, two prose writers, as Macaulay and DeQuincey, may be compared in respect to use of words, formation of sentences, paragraphing, and the more evident qualities of style. Pupils see easily the contrast between the short, simple, direct sentences of Macaulay, and the longer, more involved structure of DeQuincey, easily drawing from the comparison a helpful lesson. So a study of paragraph development will do much to solve the difficulty evident in the oft repeated questions, "What is a paragraph?" "How do you know when to end one paragraph, and begin another?" In the same way, study may be made of the interdependence of sentences, and those subtle ways by which the reader is led to follow, without jolt or jar, from sentence to sentence through various shades of meaning and phases of thought. Above all perhaps, such study will lead the student to get by absorption, if in no other way, some conception of good prose, some feeling at least for the revelation of thought in harmonious words. The other suggestion is that a mistake is made in the poetry selected for school use. We should not expect the pupil to begin with the highest form, the drama, or with its chief representative,

Shakespeare. One might as well expect the German child to begin with Faust, or the Italian child with Dante. The Greek boy was much more fortunate in having his Homer for text-book, and we might learn from the Greeks an important lesson. The first poetry read should be narrative and descriptive, as Scott's "Lady of the Lake," Goldsmith's "Traveller," and the like. When the child has learned through these to grasp easily poetic language, there is some possibility of his coming to appreciate the lyric, the epic, and the drama.

But literary taste can not be formed wholly upon study of literature in school. Equally important is reading outside of school, but under proper direction. The adverse influences are many, notable among them the mass of pleasing but ephemeral literature, prepared expressly for young people. Still the teacher may do something, and it is important it should be in the right direction. In the investigations certain questions were asked as to reading of pupils, and the answers are somewhat startling. The reading of preparatory pupils reporting has been almost wholly in fiction, poetry standing next in order. Fifty per cent. of New York students, and forty-five per cent. of those from other states had not read a single English essay. Sixty-six per cent. of New York students, and sixty per cent. of others, had read no history, except in text-books. The fiction read was largely ephemeral, and seldom included a novelist of the first rank; while the poetry was almost wholly that of American poets. In this it will be especially noticeable, that the literature helpful in forming a writer's style has been wholly neglected,

This brings us to another defect in preparatory training. In no respect are college students found to be so deficient, as in writing itself. Undoubtedly something should be left for collegiate training, but it ought not to be necessary to correct again and again the most glaring faults as to forms of expression. We should expect a well trained student to have some knowledge of punctuation, of the use of simple connections, of the difference between a sentence and a paragraph. The absence of this knowledge in students, well trained in other respects, argues great neglect in writing itself. The table of per cents will show the facts in regard to number of essays required of pupils in preparatory courses.

ESSAYS REQUIRED.	None	1-5	6-10	11-15	16-20	21-30	More
New York Students,	8	6	22	10	18	10	26
Students from other states,		20	15	15	15	20	15



It will be seen that more than 35 per cent. have not had an average of one essay a term for four years, and only 26 per cent. have had more than three a term for the same length of time. There is no need to reason from these facts, for it is evident at a glance that no proper amount of time or attention is given to the training in correct written expression. Probably facts would indicate even less attention to correction of essays and explanation of errors, both equally important with the writing itself. The truth is that, while the teaching of English should be improved in many ways, special attention must be given to composition. If one half the time spent on textbook study of English were given to systematic training in composition, neither preparatory or college instructor need be ashamed of the results presented in English examinations, nor the student be handicapped throughout his course, by his inability to express himself clearly and forcibly in his mother tongue.

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### SHAKSPERE'S CICERO.

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To know what impression the gifted Tully made upon the "dear son of memory, great heir of fame," although perhaps of no historical value, yet can not fail to interest the student of Roman history and literature. It may be urged that Shakspeare thought as Plutarch thought, since critics agree in believing the only source from which he seems to have drawn his material for *Julius Cæsar*,—and Cicero is referred to but twice elsewhere,—was Sir Thomas North's version of Plutarch's *Lives*, translated from the French of Bishop Amyot, and first published in 1579. But Shakspeare not only has "thrown a rich mantle of poetry" over every figure, but, Pygmalion-like, breathed into perfect statues the breath of life.

The paucity of references is likely at first to surprise one in the attempt to view Shakspeare's portrait of Cicero. Nay, it is folly to claim that Shakspeare has given us a life-size picture of him. He had no such aim. Cicero made no such impress as did "imperial Cæsar." This is evident because the allusions to Cæsar are numerous, occurring in comedy and tragedy, in Roman and non-Roman

plays; and because in one play the genius or spirit of Julius Cæsar, if not his character as some critics aver, is the overmastering idea. It is true that Cæsar's life presents greater scope for the dramatist, and the scenes portrayed by the faultless artist are more historically important, but in the Catilinarian conspiracy was material enough for a striking drama had Shakspeare been impressed with Cicero's claim to "*Pater patriæ*" as vividly as was Cicero himself. What schoolmaster's eye would not sparkle with joy upon the discovery of a folio containing a play with Cicero and Catiline as leading characters. Suppose that without anachronism we could write upon, "What Cicero Thought of Shakspeare." We may infer from the characters of the two that Cicero's references to the poet would be embarrassingly numerous. Cicero was a student and a scholar; the "great protagonist" was not a scholar like Cicero or Bacon. Now, though not wishing to incur the wrath of any reviewer of the reviewers of The Great Cryptogram, we venture the opinion that Bacon would often refer to so scholarly a spirit as "sweet Tully."

The fewness of the references permits the introduction of all the passages referring to Cicero. In Titus Andronicus (IV. 1) occurs:

"Cornelia never with more care  
Read to her sons, than she hath read to thee  
Sweet poetry, and Tully's Orator."

Here he is referred to as a writer, not of ethics and philosophy, but of that art in which he was *facile princeps* in the Roman world. More than that, he is worthy to be read.

In II Henry VI (IV. 1) we have from "Suffolk's imperial tongue," as he is led away to execution;—

"Great men oft die by vile bezonians;  
A Roman sworder and banditto slave  
Murdered sweet Tully; Brutus' bastard hand  
Stabbed Julius Cæsar; savage islanders  
Pompey the Great.

This passage is significant. It is the only non-Roman play in which Cicero is mentioned. Of that most interesting and revolutionary epoch of Roman times, perhaps of all history, the three most prominent characters are Pompey, Cicero and Cæsar. Here we have them in a group. There are erudite historians who consider Cicero's influence too paltry to be seriously thought of as a factor in the transition from Republic to Empire. Is this passage an instance of

poetic instinct truer than learned prejudice? The towering form of Julius Cæsar needs not the aid of adjective. Manly and massive he stands unique. The minor figures require the garnish of words. Pompey has the customary degree of *Magnus*, a title that soon glimmered beneath the greater glory of his god-like rival. The splendor of the "sublime Cæsar" dazzles; the weakness of Great Pompey surprises; but Cicero, the student, the philosopher, the sympathetic orator, the vacillating patriot, we pity and love; and Carlyle tells us that love and pity are prone to magnify. With all his imperfections he is yet "sweet Tully." To apply that adjective to Cæsar would savor of the ridiculous; to Cicero it is pat.

It is in Julius Cæsar that he is alluded to most frequently. He is first mentioned in Act I, II; Antony had offered Cæsar the crown.

*Cassius.* Did Cicero say anything?

*Casca.* Ay, he spoke Greek.

*Cassius.* To what effect?

*Casca.* Nay, and I tell you that I'll ne'er look you in the face again. But those that understood him smiled at one another and shook their heads; but, for my own part, it was Greek to me.

It is Cassius the shrewd manager of the conspiracy who is anxious to know how Cicero felt. He who knew the weight of Brutus' reputation also estimated the influence of an "old man eloquent." Did Cicero speak Greek to a Roman populace? Some critics suppose the statement is introduced simply to pave the path for the coming pun. But is it at all impossible that the prudent orator would speak in Greek when that was the polished language of Jews at Jerusalem, Syrians at Damascus, Egyptians at Alexandria, and Italians at Rome? In the same act, scene III, a conversation occurs between Cicero and Casca. We cull the most important passage. After Casca has enumerated the prodigies of the night,—

*Cicero.* Indeed it is a strange-disposed time;  
But men may construe things after their fashion,  
Clean from the purpose of the things themselves,  
Comes Cæsar to the Capitol to-morrow?

*Casca.* He doth, for he did bid Antonius  
Send word to you, he would be there to-morrow.

*Cicero.* Good night, then, Casca; this disturbed sky  
Is not to walk in.

This is the philosopher moralizing, not prone to jump to a conclusion, and the sexagenarian too careful to expose his health to the



roughness of the elements and darkness of the night. Is Cicero connected with the conspiracy? Does he think well of Cæsar? To the former question Shakspeare gives an answer in a following passage. In regard to the latter Plutarch records a suspicion once entertained by Cicero. We quote this quaint expression from Prof. Skeat's edition of North's Plutarch: "And yet," said he after doubting Cæsar's sincerity, "when I consider how finely he combeth his fair bush of hair, and how smooth it lieth, and that I see him scratch his head with one finger only my mind gives me then that such a kind of man should not have so wicked a thought in his head, as to overthrow the state of the commonwealth." Odd premises for so weighty a conclusion! The next passage tells us whether Shakspeare's Cicero was invited to be a guest at the feast on the Ides of March. The conspirators are together.

*Cassius.* But what of Cicero? Shall we sound him?  
I think he will stand very strong with us.

*Casca.* Let us not leave him out.

*Cinna,* No, by no means.

*Metellus.* O, let us have him, for his silver hair  
Will purchase us a good opinion,  
And buy men's voices to commend our deeds.  
It shall be said, his judgment ruled our hands;  
Our youths and wildness shall no whit appear,  
But all be buried in his gravity.

*Brutus.* O, name him not; let us not break with him,  
For he will never follow anything  
That other men begin.

*Cassius.* Then leave him out.

*Casca.* Indeed he is not fit.

This passage is doubly significant. It shows the weight of Brutus' word, and the worth of Cicero to the conspirators. It is Cassius, the better politician of the two prime spirits of the plot, who again introduces Cicero. It is likely that Cicero would have joined the band. He often regrets that he was not asked. It was his "sable curls all silvered o'er with white," his character, his *dignitas*, not his oratory, that were needed. To-day a critical world, agreeing with Metellus, accords to Cicero honorable esteem. Among a corrupt aristocracy the relatively pure patriotism of "sweet Tully" outranks the prudence of him of whom

"Nature might stand up  
And say to all the world, 'This was a man.'"

Plutarch explains Cicero's rejection as follows: "For this cause they durst not acquaint Cicero with their conspiracy, although he was a man whom they loved dearly, and trusted best, for they were afraid that he being a coward by nature, and age having increased his fear, he would quite turn and alter all their purpose, and quench the heat of their enterprise, (the which specially required hot and earnest execution)." Plutarch states cowardice as the reason; Shakspeare's Brutus rejects him on a different score. The Antonian orations, or Phillipics, to a marked degree have freed Cicero's name from the stigma of cowardice; every page of his writings suggests his vanity. The last reference in the play occurs in the third scene of act iv,—

*Brutus.* Mine speak of seventy senators that died  
By their proscriptions, Cicero being one.

*Cassius.* Cicero one?

*Messala.* Cicero is dead,  
And that by order of proscription.

Among the many victims of that fateful epoch the name of but one commands the notice of the dramatist. The "foremost man of all" the Roman world of wit, worth and words had met death by "vile bezonians."

From the quoted passages each reader may draw his own conclusions, keeping in mind that

"Men may construe things after their fashion,  
Clean from the purpose of the things themselves."

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### *THE POSITION OF OLD ENGLISH IN A GENERAL EDUCATION.\**

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A few days before I was requested to prepare for this Association a paper on "The position of Old English in a general education," I had closed the introduction to a small volume of translations of Old English poems, just published, as follows: "The Old English lan-

\* A paper read before the Virginia Association for the advancement of Higher Education at its first meeting at Virginia Beach, July 10, 1889.

guage should be at least as well known as Latin is now, and should occupy as prominent a position in education and general culture." This shows the point of view from which I propose to discuss the subject, and as I shall have occasion to refer to my previously expressed views, and to my experience, I trust that the frequent use of the first personal pronoun will be pardoned. By "Old English" I understand what, until recent years, has been more generally known as "Anglo-Saxon," the oldest form of our present English language, but the two terms are now often used synonymously, and they will therefore, be so used throughout this paper.

In approaching the subject we must first lay aside all prejudice, from whatever cause arising, and be ready to give a calm and judicial consideration to whatever arguments may be brought forward in support of the proposition above enunciated. Some persons seem to regard what is unknown as not worth knowing,—to paraphrase a trite Latin adage. With such there is, of course, no room for argument; the position refutes itself. Others are so conservative as always to want to "let well enough alone." They are well satisfied with the present state of the educational curriculum, and regard the introduction of other subjects as unnecessary. The curriculum that suited our fathers should suit us, and we cannot improve upon the past. It is a sufficient answer to such a position to say that, on this principle, the world would stand still forever. There could be no progress in any direction; the educational vehicle would never get out of the ruts, and no subject, however desirable or worthy in itself, could ever be introduced. There has been already too much of this conservatism in education, and it is responsible for the lack of progress in education compared with the progress made in other arts and sciences. Let each subject be viewed on its merits, and if it is necessary that anything should be displaced to make room for something better, provided no room can be otherwise found, let it be unhesitatingly displaced.

But to leave generalities and come to the particular subject with which we are concerned. Some, on a cursory view, regard the Old English language as rude and uncouth, lacking in polish and refinement, belonging to a rude age and partaking of its characteristics. One of the most recent works that has been published in this country on the "Origins of the English People and the English Language," (Roemer), speaks of the Anglo-Saxon syntax as "singularly anomalous and disorderly," (p. 354), and as an illustration of this, the



author gives an example to show that "in the same sentence the same preposition throws its connected substantives into *four* different cases," to quote his words. Unfortunately the disorder is in the author's knowledge of the subject, for, in the example given, the preposition *mid* (with) occurs construed with but *one* case, the dative, and the differences in terminations are due to the differences in inflection of the several adjectives and nouns. While this is an extreme case, it is similar to much that is written about the Old English language by those who have not made a careful study of it.

Dr. Johnson says, in the preface to his Shakespeare (Works, II, 158): "The English nation, in the time of Shakespeare, was yet struggling to emerge from barbarity. What would he have thought of it in the time of Chaucer, or further, in the Anglo-Saxon times before the Norman Conquest?" But we no longer view the past through eighteenth-century spectacles. That point of view, except in education, is at least a hundred years behind us. We now know that our Anglo-Saxon ancestors were not rude and barbarous; that their language was not uncouth; that for a long time they stood at the head of Western Europe in learning and culture. Their scholars used the Latin language itself with ease and facility for their writings long before the Normans had acquired a distinctive name, long before they came within the verge of French culture. Charles the Great, one hundred years before Rolf, sent for Alcuin from York, to organize the schools of his vast empire,—not to Paris, not even to Rome, but to the chief seat of learning in Northumbria, and to an English scholar,—and this was the century of the culmination of Anglo-Saxon poetry. Milton, in his "History of England," likened the contests between the Anglo-Saxon Kingdoms to "battles between kites and crows," thus showing his own ignorance of those times, though he did not disdain, as some scholars think, to make use of the ideas of an Anglo-Saxon poet of those very times, in the description of Satan after his fall from Heaven; for Milton's friend *Junius* had just published the first edition of the so-called poems of Caedmon.

Hume was not much superior to Milton in his knowledge of Anglo-Saxon history and literature and that portion of Hume's history needs re-writing; but since the days of Palgrave, Freeman, Green, and others, the early history of the English people has been entirely re-written, and we no longer quote seventeenth-century or eighteenth-century opinions in respect to it. This increased knowledge of the his-

tory of the Anglo-Saxons has accompanied an increased knowledge of their language and literature, but, as usual, we have let the Germans take the lead. The English and the Americans are slowly following, and perhaps another generation, if not this one, will see a more extended acquaintance with the Old English language and literature. The best criticism of Old English literature has been written by a German (Ten Brink); the best grammar of the Old English language, by another German (Siever); both of these works have been translated into English. The only edition of the whole body of Old English poetry,—of which, unfortunately, too little remains,—was issued thirty years ago by the late Professor Grein, and is now in course of re-publication, revised and improved by Professor Wülker, who has also given us the only complete bibliography of Old English literature, which work still awaits translation into English, although I learn that it is but now in course of translation into English. What scholars in America are doing to extend and popularize a knowledge of the Old English language and literature is perhaps too well known to need mention here though I may call attention to the several volumes in the "Library of Anglo-Saxon Poetry" now being published from time to time.

But why should these scholars devote themselves to this subject? Why should they expend on it their time, labor, and money too,—often a thankless and unremunerative undertaking,—if they did not think there is something here that deserves to be known, that deserves to enter into education more widely than it has heretofore done.

Thirteen years ago, in a paper on "The Study of the Anglo Saxon Language and Literature," contributed to the Proceedings of the National Educational Association at its meeting in Baltimore, (1876), I urged that Anglo-Saxon be studied in all of our colleges and universities: eleven years ago, in a paper on "Text-books and Methods of Instruction in English," read before the Virginia Educational Association, at Hampton (1878), I reiterated this opinion, and sketched the historical method as that best suited for instruction in English; and ten years ago, I developed this view still further in a paper on "The Historical Method in the Teaching of English," read before the National Educational Association, at its meeting in Philadelphia (1879). This is, therefore, with me, no new opinion and no experiment, for I have been teaching this subject for eighteen years, and while during that time the study has greatly in-

creased, and its teaching has been much more widely extended, it has not yet attained its rightful position along side of other subjects, such as Latin, Greek, and Mathematics, on a perfect equality in the educational curriculum and in all collegiate honors. It is eminently suited to this position as I shall endeavor to show by refutation of certain objections that have been made; and for all the ends that teachers have in view in linguistic and literary studies, it does not fear comparison with any other study. The historical study of English must be made on the basis of the Anglo-Saxon, or Old English language. There is no other basis for it. It is impossible to understand English before Chaucer without a knowledge of the oldest English, and this knowledge throws a flood of light upon Chaucer, Spenser, Shakespeare, and all later writers. The advocates of this study, who have experienced the advantages derived from it, should not rest content until every college in the country has a complete course in Old English as a principal and not a subordinate subject, as a *required* and not an *optional* study,—where anything else is required,—and should not cease the presentation of its claims until it shall be less common to find a student who has not studied Old English than it is now to find one who has not studied Latin. Those who have charge of the arrangement of the educational courses in our colleges have been trained under a different system; they have not pursued a thorough course in Old English and do not see the use of it, but I have yet to find one who *has* pursued such a course and failed to realize its advantages, and to advocate its inclusion in all of our college curricula. Objections have been made to the study, especially by students who are ignorant of the ends to be attained, and these objections must be briefly considered.

I have been met with the objection that the study is hard. "Hard" is a relative word, but let us accept it and answer, yes, it *is* hard, but that is no insuperable objection. We do not study subjects because they are easy. Old English is not so hard as Greek or Latin, or even German, or French. It is much easier, and it takes much less time to acquire a competent knowledge of Old English than it does to acquire such a knowledge of either one of the ancient or the modern languages studied in our schools and colleges. The trouble is that students have been studying these languages for several years at school, and have forgotten the original difficulty. Moreover, they expect to find these languages hard, and they put forth the



effort necessary to overcome the difficulty; but because a subject is called "English," they imagine that it must be easy; that they ought to know all about it without effort,—for who doesn't know English!—and when they discover their mistake, they are at once taken aback; instead of braving themselves for the effort, they want to let the subject drop. Let students once understand that they must labor to learn English, especially Old English, just as they do to learn anything else, that the study must not be pursued in a *dilettante* fashion, and we shall hear no more of this objection. Another objection, incidentally alluded to, which sometimes possesses older heads, that there is *no use* in the study of Old English, must be met differently. There *is* use in it, from our standpoint, and we must try to convince the objectors. Is there any use in philological training? All scholars, in both classical and modern languages, will answer this question affirmatively. I wish it distinctly understood that I have no quarrel with the classicists, and I have for some time been walking arm in arm with the modernists. My argument is that the study of Old English furnishes just as good philological training as the study of the classics; that the claims made for the study of Latin, for example, that it trains the student in analysis and synthesis, in linguistic observation, discrimination, judgment, and reasoning are just as true of the study of Old English; that in tracing the operation of phonetic laws Old English has advantages over Latin; that, while its forms are not so numerous as in Latin, its inflections are, on that account, more easily learned and serve all the ends of the study of linguistic forms; that, while its syntax is not so highly developed as the Latin, it shows a complete syntax simple in structure, and is much more serviceable than Latin in tracing the development of modern English syntax; in fact, many common English idioms are inexplicable on any principles of Latin syntax and we must resort to Old English if we wish to learn their origin, history, and explanation. And, with leave of my brethern of the modern languages, I aver that the study of Old English gives to the student better philological training than the study of any modern language, because of its direct service in the historical study of English; for the ordinary college student does not learn Old French and Old High German; he studies French and German for the mere practical purpose of reading, and perhaps writing, these languages with facility. If the student learns Old English, he has the means of tracing directly the origin of words, forms, and idioms, in that portion of his own lan-

guage that constitutes its indispensable foundation. There is not a form in modern English that is not derived from Old English; there is scarcely a common word in daily use that cannot be traced to its original in Old English; there is not an idiomatic construction in the English of to-day that has not its roots in the English of a thousand years ago. English scholars will pardon me for uttering truisms, for repeating what has been so well and so often said by others, but it is necessary to keep these facts continually before the minds of the public, and especially of teachers. "*Fortemque Gyan, fortemque Cloanthum*," may not be good rhetoric, but it expresses the facts of the case, nevertheless.

Henry Rogers showed fifty years ago the indebtedness of Modern English to Old English for its vocabulary, the intimate and indispensable nature of that portion of our vocabulary that we inherit, by an indefeasible title, from our Anglo-Saxon ancestors. The illustrious founder of our own University, saw so clearly that there was this close connection between the Old English and the Modern English that he wrote an "Essay toward Facilitating Instruction in the Anglo-Saxon," and made provision for the teaching of Anglo-Saxon in the University course, the first provision of the kind ever made on this continent. It is true that his ideas of the language were sometimes mistaken, and necessarily so before the study of it had been placed on a scientific basis, yet he had the right view of the position and importance of the study, and was far in advance of the teachings of that day. His well-known "Essay" was written in 1798, while he was Vice-President, and it opens as follows: "The importance of the Anglo-Saxon dialect towards a perfect understanding of the English Language seems not to have been duly estimated by those charged with the education of youth; and yet it is unquestionably the basis of our present tongue." Now nearly a century later we must reiterate Mr. Jefferson's statement as to the lack of due estimation of the Anglo-Saxon by those charged with the education of youth, and yet how great a change has taken place in the interval! The study of Anglo Saxon has been introduced into many of our colleges and universities, into some as an elective, into others as a required study; but it has not yet secured its rightful position as a required study for the degrees of Bachelor and Master of Arts along side of Latin, Greek, and Mathematics. Not even in Mr. Jefferson's own institution has English of any period, let alone Old English, secured this position, but I confidently

look for this to come in the course of time. The logic of events is irresistible, and no opposition can withstand it. Eleven years ago, before my connection with that institution, I asserted in the second one of the papers above mentioned: "The claims of English philology will not be satisfied until it is put on a par with the other studies required for the Master's degree, and a 'Diploma in English' shall mean as much and shall weigh as much in the estimation of the public as does now one in Latin, Greek, and Mathematics;" and in the third paper I used the following language: "If any study is not esteemed by collegiate authorities and put on a par with others, both in the requirements for admission and in the course of instruction, its honors and emoluments, it will be similarly regarded by the students and will naturally 'go by the board.'" This was an *a priori* probability, made as a general statement; it has proved to be an *a posteriori* fact in a particular case.

My thesis is as stated, that the study of English, especially of Old English, furnishes a philological training on a par with that supplied by any one of the classical or of the modern languages; it should therefore be placed on a par with these languages in education, and not be handicapped in the curriculum. Let there be no discrimination made in the character of the Olympic dust that the chariot-wheels may collect; but let the same goal be set before all, and let each contend on an equality for "the noble palm" that is to deify the victor. I have not claimed a superiority of position for Old English,—though I might well do so by reason of the advantages derived from it in the study of Modern English,—but I have claimed a mere equality, thus giving the opportunity of securing for this subject the better class of students, as candidates for honors usually are. Where such equality is recognized,—and it has been recognized in many of the colleges and universities of the country, for they make no discrimination against the study,—Old English does not fear competition. Here alone the necessary stimulus exists for both teacher and pupil; both are animated by an honorable ambition to excel, and here alone real progress is made. It is sometimes objected that, if we give to Old English this equal position, it will crowd the curriculum, and students will take longer to complete it. Be it so. That is not a serious objection; it will do no harm for students to spend more time in acquiring a general education. Hurry is the bane of American life, and nowhere do we see more evil effects from it than in education. We should go slower, and



take more time, if necessary, to complete the educational course. But if we do not wish to increase the time, let us at least make Old English alternative with other languages, and let students take their choice. Let there be a classical side and a modern side of the curriculum freely open to all, and let Old English be *required* on the modern side, so that all who study English on this side must study Old English. If we once cease to look upon it as something outside of the regular curriculum, as an ornamental appendage to an English course; if we regard it as an integral part of such a course, and hold that no English course is complete without it, then alone will it assume its rightful position, and then alone will the advantages derived from its study be realized. It must be studied in earnest, as the preliminary and necessary basis for the superstructure to be erected,—namely, a thorough knowledge of the English language. There is still another argument that justifies the position claimed for Old English in education, and that refutes the objection that there is no use in the study of it, and that is the value of its *poetry* as a revelation of the Teutonic mind, as a natural emanation of the Teutonic spirit in a literary form that suited its aspirations, one that originated before it was brought under the powerful influence of Christianity, and that continued long after in its religious poetry. Professor Earle says, in his short history of “Anglo-Saxon Literature” (p. 119): “Our people had a native gift of song, and a tradition of poetic lore, which lived in memory and was sustained by the profession of minstrelsy. The Christian and literary culture obtained through the Latin tended strongly to the suppression and extinction of this ancient and national vein of poetry; but happily it has not all been lost”; and then he proceeds to treat the chief features and remains of the Anglo-Saxon poetry, beginning, as was natural, with the “Beowulf.” If we study Homer to learn the early poetic working of the Hellenic mind, the beginnings of ancient culture, we should study Old English poetry to learn the early manifestation of the Teutonic mind, the beginnings of modern culture; for this poetry antedates all other Germanic and all Scandinavian poetry, and is long anterior to any French, Spanish, or Italian poetry, even anterior to any literary use of those languages. It existed before any one of the many dialects derived from mediæval Latin, as spoken in the different provinces of the Roman empire, had established itself as a literary language.

Professor Ten Brink, in his "Early English Literature," says, (p. 13): "A genuine epic poetry seems first to have grown up among the Germans in the migration of races. Its precursor among them, as in all cases, was *hymnic* poetry,"—(p. 15) "Most of the German peoples apparently rested at this stage of epic poetry,"—(p. 16). "A single German branch ascended in that early time to a higher level of epic poetry, a level midway between the epic surviving in detached songs, and the epos as it developed, in the highest sense, among the Greeks, and under less favorable conditions (hence less humanly-beautiful), yet quite as vigorously, in France. This branch was the same that subdued Britain." And to those who still have an idea that the English people, the English language, and the English literature of that day were rude and uncouth, I would commend the following, (p. 17): "More refined manners, a fixed ceremonial grew up by degrees at the English courts. Although life was yet very primitive, it took on a somewhat nobler expression. Poetry constituted its most ideal side. Where all of life had gained in value and meaning, it became the task of poetic art to mirror, not only the violent crises, but the every-day details of this life, to re-produce in the picture those things, events, modes of intercourse, which pleased in reality. Thus the epic form of the hero-saga was developed in the sixth century, among the English tribes, to that fulness of life indispensable in our conception of the epos," (Kennedy's translation of Ten Brink's "Early English Literature.")

It would prolong this paper to too great length to quote what Professor Ten Brink says of the diction and style of the Old English epos, but I would commend it to every reader. The same diction and style is seen throughout it all during its flourishing period. Originating in heathen times, expressive of a full, free, and active life that delighted in heroic exploits, hence full of animation and vigor, the form fitting the thought,—our earliest exhibition of that well-known rhetorical principle,—this style, under the softening influences of Christianity, was transferred to the later religious poetry of Cædmon and of Cynewulf, and of their contemporaries and successors, so that we have in Old English poetry an original and well-marked form of early literature which, though small in quantity, is of inestimable value as the first expression of the poetic imagination of the English people. The culture that produced this poetry was crushed out by the Danes, and to these the Normans succeeded, so that the native English mind was repressed for centuries, and when it again

blossomed into literature, it was under different influences, and both people and language were composite in their character. But just as in the language itself the basis is pure English, the bone and sinew of Anglo-Saxon stock, so in the literature there exist the qualities of the Anglo-Saxon mind, the plain, straight-forward common-sense, the earnest vigor, the patient endurance, characteristic of the people; to which were superadded the brilliant vivacity, and the expansive imagination of their Norman-French conquerors, all welded into one English people, whose elements are now inseparable. This poetry then, as the literary expression of the Old English mind and the representative of the Old English life deserves a position in the education of an English people. I have spoken especially of the poetry, as it is the more original and characteristic portion of Old English literature. The prose, however, should not be neglected, although it is more imitative, mainly modelled after the Latin and is almost entirely of a didactic and religious character. Its style, however, is simpler, and it serves better than the poetry for an introduction to the study of the Old English language. Then both from a philological and a literary point of view I conceive that Old English should enter into the curricula of all our colleges and universities. Let no one imagine that this is the sole, or even the main, study of English that I advocate, but I have limited my sermon to my text, and while I think that this English course should stand on a par with any and every course in all of our educational institutions, I think that Old English should form an integral part in every *collegiate* English course. Let the teachers improve the English courses in the schools. Let the history of the English language, as well as grammar, rhetoric, and English literature, be taught in all the preparatory schools, and then students will have formed some idea of the value of Old English to a thorough knowledge of the English language, and will be better prepared to enter upon its study. Moreover, do not relegate Old English to the post-graduate course, or even to the university course, but let it form an integral part of the regular collegiate undergraduate course.

To my mind, a nearer approach to the true position of English has been made in the Johns Hopkins University than in any other of our institutions. There, in the matriculation examination, in addition to English grammar and composition, the history of the English language is required of *all* students. All students, candidates for Bachelor of Arts in any one of the *seven* groups, are required to



study English composition and English literature, and if they are candidates in the Modern Languages group, they must pursue in addition, a course of English including Shakespeare, Chaucer, prose-writers, phonetics, history of the language, Anglo-Saxon, Early English, and history of the literature. And with reference to Old English, or Anglo-Saxon, in the words of the detailed statement : "On the language side, the guiding principle in introducing students to this study is that English is one language in all its periods and in all its forms, and that Anglo-Saxon, Early and Middle English are only earlier stages of Shakespearian English. The study of Anglo-Saxon is therefore begun at once, and the forms and syntax are explained from the resources of English itself in its later periods. The attempt is made in this way to replace the empirical English grammar of the school by a real grammar, which shall be learned genetically, in Anglo Saxon, and in Chaucerian and Elizabethan English." This is the only true method, and this course presents an adequate idea of "the position of Old English in a general education." It is the method that I have been preaching for thirteen years, before the organization of the Johns Hopkins University, and it is being known by its fruits from year to year in the regular undergraduate course of that institution. *O si sic omnes!*

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### COMMUNICATIONS.

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#### *To the Editor of the Academy :*

I have been much interested in the February number of THE ACADEMY containing the official report of the Fifth Holiday Conference of the Associated Principals of New York. I was especially interested in the discussion on original work in geometry, and was gratified to know that so many of the principals, under the influence of Mr. Capen's teaching, have their faces towards the light. The unfortunate expression, "geometry without a text-book" seems however to have crept into the discussion, and to have caused considerable misunderstanding especially in the minds of those opposed to reform.

The word text-book is a very indefinite term and may mean books of vastly different make up. It may even mean a book of

headings written out by the pupil himself. The issue is not between "geometry with text-books," and "geometry without text-books," but between geometry from text-books with demonstrations more or less elaborated, and geometry from a text-book without such demonstrations and accompanying figures. This last may be only a written copy of the propositions systematically arranged. The use of such a text-book as this was what I take it was meant by those who spoke of "geometry without a text-book." The opponents of this method seemed to me to be laboring under one great misapprehension. They seemed to assume that the teacher had no knowledge of geometry, nor judgment, and therefore if the pupils can not have text-books that tell them everything, they can have absolutely no help at all. On the other hand the pupils can work out unaided, if properly taught, at least five-sixths of all there is in plane geometry, and will take delight in doing so; and it should be left to a judicious teacher to say when the hints and suggestions that constitute the other sixth should be put in. This can not be done by books. It would hardly be worth while to allude to this assumption of "no teacher," were it not so prevalent. *THE ACADEMY* itself, I am sorry to say, furnishes an occasional illustration of it. In a review in *THE ACADEMY* for June, 1889, of that excellent book, "Second Lessons in Arithmetic," by H. N. Wheeler, the reviewers found fault with the book on the ground that unless it is in the hands of a skillful (sic) teacher there is great danger that the pupils will learn how merely to "cipher," not to "reason," and again, the "how" is well taught but the "why" is not so clear, and other expressions of this sort which makes one exclaim, "What for heaven's sake is the teacher for?" It is the charm of Mr. Wheeler's book that it recognizes the teacher, and does not aim to supercede him.

One remark of Mr. Capen's somewhat surprised me, for it is entirely opposed to my own experience. It was the following: "I am in doubt about it only because it is so difficult. It takes a teacher who will discount Job for patience. It takes a teacher who is willing to work in the dark utterly for from eight to ten weeks before he gets any results: that is, I mean results worth talking about."

I have not found it so. What requires and exhausts patience is to give a class a demonstration all marked out, that they have only to memorize, and to find that they have not done it; then to go over the demonstration two or three times yourself and find that still they don't half catch on; and then in the written tests, to get only

a jumbled and confused mass of fragments of mathematical ideas; this is what takes patience.

And then what does Dr. Capen mean by results "not worth talking about?" I have a class of pupils, in age averaging about sixteen, who began plane geometry last September. Before ten weeks were over they had finished the first two books of plane geometry (as arranged in my manual) constructing every figure for themselves and doing at least five-sixths of all the work by original demonstration. Any class of the same age can do it. Are these results "not worth talking about?" I claim that the results of these ten weeks were infinitely more valuable than if the class had gone through the whole of plane and solid geometry in any period of time with the ordinary text-book. What does Dr. Capen mean by "results?"

J. W. MAC DONALD.

Stoneham, March 1, 1890.

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### NOTES.

Until further notice we will mail to any address Volume II of THE ACADEMY, on receipt of \$.75, and Volume III for \$1.00. Volume III includes the seven prize essays on "Science in Secondary Schools."

Copies of the February, 1890, number, containing the "Official Report of the Fifth Holiday Conference of Associated Academic Principals of the State of New York, held at Syracuse, December 26 and 27, 1889," will be furnished on demand—price 15 cents.

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THE ACADEMY notes, with entire approval, the newspaper report of a recent lecture by Prof. W. G. Hale on *Humanism* in its relation to education. For to the medieval term *humanism* Prof. Hale, Professor of Latin though he be, gave a new and revolutionary meaning. Hitherto this ancient and honorable designation has restricted its import to the study of the Greek and Latin languages and literatures. No other intellectual interests have dared to seek shelter under its protecting ægis. But, if he is correctly reported, Prof. Hale makes the term *humanism* include history, art and general



literature." This is an innovation which we are sure many zealous humanists would unhesitatingly repudiate. But Prof. Hale is right. It is no longer possible to discriminate, as to their liberalizing influence on the mind, between the various studies that equally lead the students away from present interests and from gainful pursuits.

This is the position of THE ACADEMY. The ancient conception of humanistic studies was narrow and unfitted to survive into an age of multifarious forms of intellectual devotion and of scientific self-sacrifice. The essential idea of the ancient humanism was altogether good. If not in the consciousness of its devotees, at any rate in a certain large historical sense, it stood for centuries as representing the supremacy of the spiritual concerns of human life. To humanism and the Christian Church modern civilization, and especially modern education, owe their best and most fundamental characteristics.

What was temporary and bad in the ancient humanism was its tendency to cleave to the narrow forms of its original embodiment in customs and institutions, and to form an isolated class of scholars. The language of old college charters, the nomenclature of diplomas, the ritual of commencements, all show from what an incubus of self-consciousness the modern educational world has been freed. The common sense of mankind no longer tolerates the existence of a scholarly class. The essential traits of the scholarly character exist equally in persons of all sorts of education.

In a modern college the teachers of Latin and Greek come no more closely into touch with the highest and most unselfish aims of the young man than do any other teachers whatever. Whatever forms of speech still persist in the conventional observance, the ancient languages have lost their prestige, and young men choose them or reject them without any risk of harm to their future as scholars.

The truth is,—any study whatever may be pursued in the spirit of devotion to truth,—that is, in the spirit of a true humanism. It is equally true that any study whatever may be pursued in the mercenary spirit, which is the opposite of a true humanism. Chemistry is, *per se*, as truly humanistic as is the study of the Homeric particles. That the girl who has studied chemistry will make bread more intelligently for this study no more vitiates her mental activity with the taint of utilitarian ends than the fact that the man who ponders the Greek particles will publish his results for fame and money vitiates *his* labor in the same manner. There is an amount of cant

prevailing among educators as to the word *useful* that quite obscures the true values of various studies.

The children of fortune who are privileged to ignore useful considerations throughout the precious years of education cannot and should not set the standard for our schools and colleges. The value of a study has no relation to its utility. The extreme humanist esteems a study because it is *not* useful: the extreme utilitarian esteems a study because it *is* useful. The two opposites are reconciled in the new criterion, which is that a study be *interesting*. Whatever study is interesting is humanizing. Provided the faculties are stimulated and the sympathies enlisted, it matters not much in what category of language, art or science the study lies. The great wrong to a young student is not inflicted by giving him studies that are, or are not, useful, but by allowing him to study without devotion, without abandon, without conviction. Most youth must study with the future in view. Any wanton phrasing that casts contempt upon these sincere workers or suggests that they are necessarily falling short of any loftiness of aim possible to the fortunate few should be looked upon askance by every true teacher.

#### BOOKS RECEIVED.\*

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*Exercises in Latin Prose Composition for Schools.* By M. Grant Daniell, A. M., Principal of Chauncy-Hall School, Boston. Part I, based upon Cæsar's Gallic war, Books I-IV. Part II, based upon Cicero's Catiline, I-IV, and Archias. Leach, Shewell & Sanborn, Boston and New York.

The Latin composition manuals of a generation ago grouped miscellaneous sentences about grammatical rules. The matter for translation had no unity in itself, but only the extrinsic unity of fitness to illustrate some principle of the language. This was poor pedagogy. The juvenile mind inevitably seeks to enter into some relation to the content of the speech forms which it has to study. If the teacher's method utterly thwarts this natural tendency in the learner, the result is not a closer concentration upon the abstract principle, but a dissipation of interest in the study as a whole and a loss of growth in the unconscious linguistic feeling. As the maxims long familiar

\* Any of these books may be more fully noticed hereafter.

to primary teachers gradually creep into the consciousness of secondary ones, a groping for more concentration and more unity of procedure manifests itself, and more wholesome methods come to be practised even in the teaching of the ancient languages.

Mr. Daniell's book is a distinct advance upon the old style Latin composition in that it makes the learner's translation *from* Latin and his translation *into* Latin revolve about the same center. Each thus helps the other, not by happy coincidence and occasionally, but with absolute certainty and every day. The mind of the pupil, moving in a certain channel which it has made for itself in translation, uses the same channel for retranslation. The old ascetic drill-master would have thought he found a fatal objection to this proceeding in the fact that it makes Latin composition easier, or perhaps even renders it a pleasant occupation.

Both these consequences we think flow from the changes which the modern manuals, and Mr. Daniell's book pre-eminently among them, have made in the methods of teaching this branch of preparatory work. But the times are no longer ascetic. It is now eminently orthodox to help the young learner by enlisting his interest in his task, and especially to help him by making his various studies throw light upon each other.

The term *composition* has quite different connotations in the Latin and Greek classes from what it has any where else. Mr. Daniell does not depart from the technical use of the term peculiar to his guild as a classical teacher. But, strictly speaking, this is not composition at all. It is simply reversed translation. It is not customary in American schools, as it is in German gymnasia, to require pupils to express directly in Latin the contents of their minds as shaped by observation and reasoning. The English-teacher would strenuously resist the suggestion that the English composition should flow from a mental content wholly attained through language and not digested by the pupil's own mental processes.

But though the modern Latin composition manual makes no pre-supposition of a stock of thoughts in the pupil's mind that seek expression and simply gives sentences for backward translation, yet it is all important that these sentences be not miscellaneous and detached, but have some relationship among themselves and a common root in a standard of Latinity with which the pupil is becoming more and more familiar. That is to say, the pupil should have,—not a key or a pony,—which would deprive his composition work of all value,—



but a standard by which to measure his results, which will make his work fruitful and stimulating. Thus a dim, dead-language adumbration of the native teacher is secured for the Latin work also. Cæsar and Cicero perpetually repeat their ancient forms of speech. This is all that Dr. Sauveur does with his modern ones. When the learner is listening to Cæsar he should write on Cæsar's themes that he may the more securely express himself in Cæsar's style.

Mr. Daniell's book seems to omit no possible feature of usefulness or adaptedness to the class-room. It has two kinds of exercises,—an easier one for oral, and a more difficult one for written, translation. It has also notes, properly sparse and brief, and is going to have a vocabulary.

Heath's Modern Language Series. *Sept Grands Auteurs du Dix-Neuvième Siècle*—Lamartine, Victor Hugo, Alfred de Vigny, Alfred de Musset, Théophile Gautier, Prosper Mérimée, François Coppée. An Introduction to Nineteenth-Century Literature, by Alcée Fortier, Professor of French Language and Literature in Tulane University of Louisiana. Boston, U. S. A.: D. C. Heath & Co., Publishers. 1889.

The Riverside Literature Series. *Waste Not, Want Not, and The Barring Out*. Two Tales by Maria Edgeworth. With a Biographical Introduction and Notes. Houghton, Mifflin & Company. Boston: 4 Park Street; New York: 11 East Seventeenth Street. The Riverside Press, Cambridge.

The Riverside Literature Series. *The Riverside Manual for Teachers*. Containing suggestions and illustrative Lessons leading up to Primary Reading. By I. F. Hall, Superintendent of Schools at Leominster, Mass. Houghton, Mifflin and Company. The Riverside Press, Cambridge. 1890.

*Jeanne D'Arc*. By A. De Lamartine. Edited with Notes and Vocabulary by Albert Barrère, Professor, Royal Military Academy, Woolwich, England; Examiner to the War Office; Officier de L'Instruction Publique. Boston: D. C. Heath & Company. 1889.

*Mental and Manual Training in Form-Study*, as exemplified in Krüsi's Drawing Course. A Manual for the Information of Teachers, including a Course of Study for First Year in Schools. New York: D. Appleton and Company. 1890.

*The State and Federal Governments of the United States*. A brief Manual for Schools and Colleges. By Woodrow Wilson, Ph. D., LL. D. Boston, U. S. A.: D. C. Heath and Company, Publishers. 1889.

*Exercises in Wood-Working*, with a short Treatise on Wood. Written for Manual Training Classes in Schools and Colleges. By Ivin Sickels, M. S., M. D. New York: D. Appleton and Company. 1890.

*The New Arithmetic.* Edited by Seymour Eaton. Fifteenth Edition. With Preface by Truman Henry Safford, Professor of Astronomy in Williams College. Boston: D. C. Heath & Co. 1889.

*A Primer of French Literature.* By F. M. Warren, Ph. D., Associate in Modern Languages in the Johns Hopkins University. Boston, U. S. A.: D. C. Heath & Company, Publishers. 1889.

*The First Book in Color,* being a complete practical Theory and Method of Color Construction as Color appears materially. By Stephen W. Tilton. Boston: Published by the Author. 1889.

International Educational Series. *Practical Hints for the Teachers of Public Schools.* By George Howland, Superintendent of the Chicago Schools. New York: D. Appleton & Co. 1889.

*The Public School Music Course.* By Charles E. Whiting, formerly Teacher of Music in the Boston Public Schools. Six Books. Boston, U. S. A.: D. C. Heath & Co., Publishers. 1889.

*Hand-Book of Psychology.* Senses and Intellect. By James Mark Baldwin, Ph. D., Professor of Philosophy in Lake Forest University. New York: Henry Holt & Co. 1889.

*First Lessons in Political Economy.* By Francis A. Walker, Ph. D., LL. D., President Massachusetts Institute of Technology. New York: Henry Holt & Company. 1889.

*La Métromanie Comédie,* en Cinq Actes, par Alexis Piron. With an Introduction and Notes, by Léon Delbos, M. A. Boston: D. C. Heath & Company. 1889.

# THE ACADEMY:

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## *A JOURNAL OF SECONDARY EDUCATION*

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DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND  
ACADEMIC DEPARTMENTS

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### *THE FUNCTION OF THE SECONDARY SCHOOL.\**

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PROF. NICHOLAS MURRAY BUTLER, COLUMBIA COLLEGE.

Mr. Matthew Arnold has reminded us that the secondary school is the most ancient of existing educational institutions. It antedates the university by several centuries, and by its side the primary or elementary school, springing as it does from needs and ideas that are comparatively modern, seems but a creature of yesterday. Moreover, the history of the secondary school is unbroken and easily traceable. The Monastery Schools and the famous establishments at St. Gall, Reichenau and Fulda are the direct ancestors of our Etons and Rugbys, of our contemporary Lycées, Gymnasias and Academies.

In this country the educational organization is so indefinite and unformed and the educational terminology in common use so unsystematic, that certain explanations are necessary before any discussion of the province and scope of the secondary school may be proceeded with. The threefold division of instruction into primary or elementary, secondary and superior, has been accepted by our National Bureau of Education and is in accord with the practice on the Continent of Europe. By superior instruction is meant that given in institutions empowered by law to confer degrees. This

\* A paper read before the New York Schoolmasters' Association, March 8, 1890.



may be either general or special, and includes in this country the colleges and universities as well as the professional schools of law, medicine, theology, pedagogy, agriculture, pharmacy, engineering and the like. The implication is, but unfortunately not always the fact, that these institutions for superior instruction have required of applicants for admission the possession of an approved secondary education. By primary or elementary instruction is meant such as the state is justified in requiring of all children for its own safety and perpetuity. In the present state of educational science this may safely be held to include a knowledge of reading and writing, of elementary arithmetic, geography, history, natural science and manual training. This elementary education should begin not later than the sixth year of life and with the average child seven years may be devoted to it, although specially intelligent or studious children should be permitted, as in France, to complete the prescribed curriculum in less time.

It would seem natural then, that the field of secondary instruction should be that which lies between the primary and the superior schools. But this is not quite true. The aim of secondary education and the character of the subjects comprised in it are such that while it is legitimately bounded by superior instruction on the one hand, it cannot be entirely contained within the limits fixed by the ending of primary education on the other. Elementary instruction is organized as a thing by itself and it is well understood that it is specially intended for children whose systematic education will, in all probability, end when the primary course is completed. The secondary school on the other hand, while in a certain sense complete in itself, looks forward to having its pupils pass on to some form of superior instruction and expressly prepares them to do so. It would be difficult to name a single instance of a secondary school conducted under private auspices that does not aim chiefly, if not entirely, at preparing boys for college. In order, therefore, that secondary education may be complete and harmonious, it must begin not later than the tenth year of the pupil's life. This is actually the case with the French Lycée and the Prussian gymnasium. In the discussion that follows it will be understood that only such secondary schools are referred to as stand in direct relation to the colleges and other institutions for superior instruction. This limitation excludes those public high schools which, although nomi-

nally secondary schools, have an end peculiarly their own and do not specifically prepare their pupils for anything higher.

The American college is, in the phrase of Tacitus, *tantum sui similis*. It has no counterpart in Europe. Measured by foreign standards it is something more than a secondary school and considerably less than a university. In its early history the American college was, in the scope and character of its curriculum, essentially a secondary classical school. Boys entered its freshman class at thirteen years of age or even younger and were Bachelors of Arts in four years. As new demands were made upon this college and as its curriculum was augmented and enriched, entrance became more difficult and was postponed until a later period. This process has gone on until now the average age of the members of the freshman class at Columbia is about seventeen and one-half years. At Harvard it has reached the extravagant age of nineteen years. The effect of this development in postponing beyond all reasonable limits the entrance of the professionally educated man upon the work of life, has been to call attention in a most emphatic way to the necessity of revising our whole scheme of secondary and superior education. This revision is now going on, and it is bringing to light the composite character of the average American college. It is coming to be seen that the senior year of the college course, and not infrequently the junior year as well, is in reality a period of university and not collegiate instruction. The operation of the elective system and the introduction of original research and comparative methods of study, have transformed the latter half of the course in all of our larger colleges. But the work of the freshman and sophomore years is as a rule (qualifying phrases are necessary to all statements regarding our colleges, so diverse and even contradictory are their practices) the same as it has always been. Not only the old studies but the old disciplinary methods of teaching remain in these lower years. And, it is to be noted, these studies and these methods of teaching are substantially the same as those of the secondary school. It is here that the college not only gives evidence of its origin, but furnishes a hint as to what direction its future development is to take. Somewhere and somehow the four years' course of study in the larger colleges is to be cut in two; the division may be made at the close of the junior or perhaps even at the close of the sophomore year. The upper portion of the course which remains will be recognized as belonging to the university and

by uniting with the studies which the Germans group together in their philosophical faculty, university instruction in law, medicine and, in some cases, theology, the real American university will arrive and the problem of an earlier entrance upon professional life adequately prepared, will be solved. In illustration of this process of differentiation there might be cited in detail certain steps which have been taken within a few years at Harvard, at Princeton, at Columbia and Cornell. When this division is made the present freshman and sophomore years will be frankly recognized as belonging to the period of secondary instruction. Some universities may prefer to do away with them entirely. Doubtless the majority will retain them as a sort of preparatory course, not indeed without its value, for the peculiar work of the university itself. In the smaller and less centrally situated colleges the present organization will probably remain substantially as it is and afford an excellent conclusion to the secondary education of those who do not look forward to university or professional studies. The baccalaureate degree, really and historically a university privilege, can probably never be reclaimed by its original proprietor. In that case some new basis on which to grant it must be arrived at, in order to sustain the reputation of this degree and put an end to the anomalous condition in which it now finds itself. It will readily be seen that it is the writer's belief that we shall approximate in this country, between our secondary schools and colleges and our universities, a relation very similar to that which exists between the Gymnasias and the Universities in Germany, or between the Lycées and the University faculties in France. The whole trend of educational development in this country and the wisdom and statesmanship with which the relations in question have been established on the continent of Europe, are sufficient reasons for this belief. So much that is apparently beside the mark in a paper on the subject of secondary schools is necessary, because it is my wish to discuss that educational institution with reference to those conditions which, it seems to me, are rapidly approaching rather than solely from the standpoint of those which are just as surely passing away.

In the past the secondary school in this country has been dwarfed in importance and deprived of its proper spontaneity and individuality because it has permitted itself to settle down to the routine task of preparing pupils for the entrance examination to college, fixed and conducted by the college authorities. Whatever that en-



trance examination demanded and in some cases just a trifle more, has been taught; whatever such examination did not call for, no matter how important or valuable it might be for a boy's education, has not been taught. The secondary school, then, has been too largely dominated by the college and in few cases has that domination been other than unfortunate. As notable instances where the contrary is true may be mentioned the stimulating influence of the more recent regulations regarding entrance examinations adopted by Harvard College and the novel unity and thoroughness imparted to the instruction in English in the secondary schools by the action of the New England colleges in uniting upon a scheme of conditions for entrance in that subject. It is neither proper nor dignified for the secondary schools to continue in this condition of dependence. They should be as independent and as self-centred as the Gymnasium and the Lycée, and by a careful study of the history and science of education coupled with the teachings of their own large experience, they should seek to devise that curriculum and those methods of instruction that are best suited to the mental, moral and physical development and culture of the boys committed to their care. Nor need it be feared that in so doing they will interfere in any way with the preparation of their pupils for college examinations. For in education it is profoundly true that that which is intrinsically the best in any particular stage of development, is also the best preparation for that which comes after.

If the American boy is to obtain his baccalaureate at the age of twenty or twenty-one (which is considerably more than a year later than the French boys leave the Lycée and the Prussian boys the Gymnasium), he must be ready to leave the secondary school not later than seventeen; and this can be arranged while actually providing a more comprehensive curriculum than at present obtains. Before discussing in detail the composition of such a curriculum, one or two preliminary considerations must be mentioned. They may however, be dismissed very briefly since they have so recently been treated with the highest authority by Mr. Eliot.\* The first of these has to do with the length of the school day and that of the vacations. The former should never be less than five full hours of study and school discipline and the tendency to shorten it any further is irrational and should be checked. A program arranged on sound

\* Can School Programmes be Shortened and Enriched? *Atlantic Monthly*, August, 1888, pp. 250-258.

pedagogic principles can occupy five hours a day easily enough without in any way impairing the pupil's health or lessening his interest, unless the teacher is peculiarly lacking in mental equipment and professional qualifications. The vacations are now unduly long, and seem to be yielding to a certain strong social pressure to make them even longer. The old-fashioned summer vacation of four or six weeks has long since become one of ten or twelve and in our city schools a summer vacation of fifteen or even sixteen weeks is by no means a curiosity. It is the teacher who needs this vacation more than the pupil. But even from his standpoint the present practice has gone beyond reasonable bounds. The German method of giving three weeks at Easter, one at Pfingster, six in mid-summer, one at Michaelmas, and two at Christmas seems wiser than ours, for it makes a more frequent alternation between work and play. Perhaps sixteen weeks—including the recesses at Christmas and Easter and a long summer vacation, as better suited to our climate and habits of life than the German plan—might be agreed upon as the average period per year in which school duties may wisely be suspended. But in addition to the school year of thirty-six weeks and twenty-five hours in each week, our secondary schools are sadly in need of better teachers. It is remarkable how entirely the teachers in these schools have remained uninfluenced by the great interest in the science and art of teaching which has of late years manifested itself both in this country and in Europe. Secure in their possession of a considerable amount of knowledge and more or less culture, the secondary school teachers have not seemed to understand the significance or the value of a professional preparation. As a result their work has been done in a routine, imitative way and their pupils have suffered. Most of the criticisms that may now be legitimately made upon the work of the secondary schools would be disarmed if the teachers in these schools were abreast of the present development of their art. One important reason why the secondary schools have not felt this full measure of progress in methods of teaching that is so marked in the elementary schools, is that secondary teachers are usually college graduates and the colleges have done little or nothing to show that they are aware of what is being accomplished in the science of education. Consequently they have failed to contribute their proper proportion of duly qualified teachers. Until the colleges assume their responsibility in this matter and endeavor

to discharge it, the work of the secondary school, speaking broadly, will not be as well done as it might be.

Assuming that more competent teachers are at hand and that a school year of thirty-six weeks, twenty-five hours each, is agreed upon, what should be the aim of the instruction in the secondary school and with what curriculum should it endeavor to fulfil its function? It should be the aim of the secondary school, I take it, by instruction and discipline to lay the foundation for that cultivation and inspiration that mark the truly educated man. In endeavoring to attain this ideal, the secondary school must not lose sight of the fact that it is educating boys who are to assume the duties and responsibilities of citizenship and who must, in all probability, pursue a specific calling for the purpose of gaining a livelihood.

To prepare a curriculum which shall keep all these points in mind and at the same time afford the developing intellect of the pupil that exercise of which it is capable, is not an easy task. Indeed it presents some problems which but a little while ago seemed almost impossible of solution. But patience, wider experience and a careful study of the surrounding conditions have lessened the difficulties. The chief of these is perhaps that created by the rapid development and present importance of scientific and technical schools. These institutions represent a real and significant movement in modern civilization. They have complicated the question of a curriculum for secondary schools by demanding a preparation quite different from that required for entrance to the average American college. That the problem thus raised belongs to the field of secondary education in general and is not due to conditions prevailing in any one country alone, is evidenced by the fact that both England, Germany and France have been brought face to face with it as we have been. In each of these countries much progress towards its solution has been made. In England the so-called "modern side" has been added to the traditional classical course. In France the Lycée has its *cours special* in which mathematics and the sciences replace Latin and Greek. In Germany the well-established Real-Gymnasium and Real-Schule are every year justifying their right to exist on an equal plane with the Gymnasium itself. A specially interesting movement in this connection is that one in Germany which is now calling for the establishment of an *Einheitsschule* in which the main features both of Gymnasium and Realschule are to be combined. The curriculum that I am about to suggest for the American secondary school combines



some features of the English "modern side" with some of those of the French *cours special*, and is strikingly like that of the institution which German educationists have in mind under the name, just referred to, of *Einheitsschule*. This plan is proposed not as a finality nor without consideration of the practical obstacles to its general acceptance, but in the belief that it is sound in principle and furnishes a suitable ideal for our present efforts to develop and systematise secondary education.

SUGGESTED STANDARD CURRICULUM FOR AMERICAN SECONDARY SCHOOLS.

Subjects	Grades	I.	II.	III.	IV.	V.	VI.	VII.	or	V.	VI.	VII.
Age of Pupil		10 yr.	11 yr.	12 yr.	13 yr.	14 yr.	15 yr.	16 yr.		14 yr.	15 yr.	16 yr.
English		5	5	4	4	4	4	4		3	3	3
Geography and History		5	5	3	3	3	3	3		2	2	2
Mathematics		4	4	3	3	2	2	2		4	4	4
Natural Science		3	3	2	2	.....	.....	.....		5	5	5
Latin		.....	.....	5	5	4	4	4		2	2	2
Greek		.....	.....	.....	.....	5	5	5		.....	.....	.....
French		3	3	3	3	2	2	2		2	2	2
German		.....	.....	.....	.....	3	3	3		3	3	3
Drawing and Constructive Work		2	2	2	2	.....	.....	.....		2	2	2
Physical Training		3	3	3	3	2	2	2		2	2	2
Total No. of Hours per Week		25	25	25	25	25	25	25		25	25	25

As will be seen the scheme proposed makes provision for a seven years' course, extending from the tenth to the close of the seveneenth year. After the fourth year of the course a bifurcation is made in order that preparation may be had specifically for the college or for the scientific school. The alternative courses are of similar, though perhaps slightly unequal value in training the pupil's mind. They represent two different temperaments and two different points of view, which no amount of argument or invective can reduce to one. The preference of the parent of the future career of the pupil must determine which of the two courses will be pursued during the three last years of the secondary school.

To enter this school the ability to read well, write legibly and perform understandingly with integers the four fundamental operations of arithmetic must be insisted upon. The growing practice

of postponing even this modicum of knowledge until after the tenth year is to be emphatically discouraged. Attention has recently been called to the fact that one of the best academies in the United States requires for admission only some knowledge of common school arithmetic, writing, spelling, and of the elements of English grammar, and that the average age of pupils on entering is sixteen and one-half years. At this age the French boy is reading Cicero, Vergil and Horace, Sophocles and Plato, Shakespeare and Tennyson, as well as studying general history, solid geometry and chemistry. His German contemporary is similarly advanced. It is very evident that there is a tremendous waste at this point in our educational system. It must be remedied and remedied at once, if our higher education is not to be discredited altogether. It can be remedied, and easily, if the secondary school will extend its course downward to the tenth year and insist that the meagre preparation mentioned be had at this age. Upon the foundation thus provided the secondary school must build gradually and solidly. Ten separate subjects of instruction enter into the proposed course. Five of these subjects are represented in the schedule prepared for each grade or class in the school; the remaining five find a place at different stages and in varying proportions according to the progress in intellectual development made by the pupil. A brief statement of what instruction is contemplated under each of the ten heads, is now necessary.

1. ENGLISH.—The study of the mother tongue may not be neglected by any class. But it must be far better taught than now and with a different aim. That the instruction in English, both in school and college, has been sadly neglected and little developed in the past, will not be denied. Perhaps no one but the college professor who requires original written work from his pupils, knows how insufficient and inefficient the English teaching in the secondary school is. A very large proportion of those students who reach the baccalaureate degree do not possess the ability to express with accuracy and conciseness, whether orally or in writing, even a simple train of thought. This woful neglect of the mother tongue has been largely due, as Paulsen points out in the case of Germany, to the great preponderance of classical instruction and the impression that this afforded all the linguistic training necessary. We have gradually emancipated ourselves from the tyranny of this notion and now the long-neglected study of the mother tongue is beginning to receive proper recognition in schools of every grade. Our ideals for this

study are no longer satisfied by the plodding through a grammar and by the memorizing of a few rules and canons of rhetoric. Language study, and particularly that of a tongue so rich, so versatile and so intrinsically interesting as our own, means far more than that. The general aim of this instruction in the secondary school should be to impart a knowledge of the principal laws of structure and syntax, to develop ease, fluency and correctness in speaking and writing, to point out the principal stages in the history of English literature and to bring the pupil to an acquaintance with some of the great masterpieces of prose and verse. Wide but carefully chosen reading and frequent and systematic exercises in composition are the most efficient means of instruction. It should be remarked, however, that composition writing is only valuable if the pupil's work is carefully and intelligently corrected and criticised. Otherwise it is a positive evil, for it serves to exaggerate and make habitual faults already present in the use of language. It is of the highest importance that the pupil should be accustomed to hear correct English spoken. The use of slang or downright inaccuracy of speech should be considered sufficient reason for a teacher's removal. A boy will learn more evil in a week from a bad example than he will derive good from a book in a month. Most language instruction should be oral and the pupil should from the very first take a large part in the exercises. As language is but the form and expression of thought, care should be taken to see that thought is always expressed by it. This cannot be the case if the pupil is forced ahead either too rapidly or in an unnatural course. The amount of time proposed for this branch of study is therefore comparatively large and no class should be relieved of the necessity of writing dictations, exercises or compositions at least as often as once a week. When this is done and done properly in the secondary school the college instruction in English may enter upon that which really belongs to it and will no longer be compelled to devote itself, as now, almost wholly to what the President of Cornell University happily describes as "the flagellation of bad English." Nor may it be forgotten that the secondary school must bear its share in teaching pupils how and what to read, in the best and deepest sense of that phrase. No English instruction is entirely successful unless it implants in every pupil a love of the masters of thought and style and a desire to grow more and more familiar with them.



2. GEOGRAPHY AND HISTORY.—These complementary studies, inseparable from each other and indispensable to a sound education, have also been sadly neglected in the secondary schools. We might truthfully say of the Americans, as Bréal said a few years ago of his fellow Frenchmen, that they are celebrated for their ignorance of geography. The subject has been so badly taught that it might almost as well have been passed over altogether. We are now beginning to follow the example set us by Germany in teaching geography and perhaps in a few years it will be adequately presented in the schools. Geography has two distinct aims. It seeks to point out and describe the character, the divisions, the climate and the configuration of the surface of the globe that we inhabit, and also to trace the modifications which man himself has made and the artificial divisions that he has marked off upon it. When dealing with the former questions geography is physical; when considering the latter it is political and commercial. It thus occupies a position between the natural and the historical sciences and connects the two. To teach it properly the child must first be led to observe his immediate surroundings. The points of the compass, relative situations and distances, the real significance of a map, may all be taught and best taught with reference to the city, town or village in which the particular school is situated. The school-room should be well supplied with globes, relief maps, charts and other illustrative material, in order that when the pupil passes from the consideration of his immediate surroundings to that of localities at a distance his understanding may receive the assistance of these symbolic representations. When political and commercial geography is undertaken, its close relation with history makes it both advisable and necessary to teach both subjects together. Perhaps no study that is pursued at this age brings to the pupil a richer store of facts or a greater intellectual stimulus than do these. Historical teaching proper will of course begin with the narration of the lives of great men and the story of their achievements. About this as a nucleus may be grouped a considerable body of facts and an account of the tendencies set in operation by leaders of thought and action. This mode of presentation familiarizes the pupil from the first with the human factor, the spiritual force, in history. The scope of the historical teaching in an American secondary school should include an accurate knowledge of the main facts in the history of the United States

and of England as well as a general acquaintance with the progress of universal history.

3. MATHEMATICS.—Whether or not Sir William Hamilton is justified in his unfavorable judgment as to the value of mathematical study, it seems clear that our schools have devoted too much time to the subject. Under the guise of mathematics much has been taught that is not mathematics at all. Abstruse and very absurd problems and puzzles in logic are to be found in almost every mathematical text-book under the delusive heading of "Examples". These simply vex and discourage the student and arouse in him a distaste for what is really valuable and practical in mathematical study. They should be passed over entirely, as should also many of the complexities of commercial arithmetic, and all but three or four of the tables of weights and measures. The metric system must be taught as a matter of course. Geometry should precede algebra for every reason known to sound educational science. It is more fundamental, it is more concrete, and it deals with things and their relations rather than with symbols. In the form of what the Germans call *Raumlehre*, many geometrical facts would be taught from the first, in the proposed curriculum, under the head of Drawing and Constructive Work. When the formal proofs of geometry are later entered upon they will therefore be seen to be easy and natural, rather than difficult and wholly strange. Good teaching in mathematics should enable the student who selects the classical course during the last three years in the secondary school, to enter college with a good understanding of arithmetic, algebra and geometry, both plane and solid. The student selecting the scientific course during the last three years could add to this a knowledge of analytic geometry, trigonometry and determinants.

4. NATURAL SCIENCE.—This is a term of wide and varying significance. As used in the suggested curriculum it has two meanings. During the first four years of the course it is equivalent to the term *Naturbeschreibung* as used in German school-programs. Applied to the last three years, it is prescribed only for such students as select the course preparatory to the scientific and technical schools, and means the experimental study of chemistry and physics. In the four lower grades it is not specifically physics nor chemistry nor geology nor botany nor physiology nor astronomy that is studied, but something of all these. The subject-matter is found in the facts of nature which surround us on every hand, and which should be as

familiar to us as the names we bear. This instruction aims to open the pupil's eyes, to teach him how and what to see, and to appreciate what the word *Nature* means. It is the most fascinating of school studies and complements and runs into every other subject. In order to give proper attention to his linguistic studies, the boy who looks forward to entering college cannot pursue science studies further until he reaches the college itself. His fellow who has the scientific school in view, however, exchanges Greek for laboratory work in chemistry and physics.

5-6. *LATIN AND GREEK.*—In the secondary schools of Europe Latin still occupies the leading place. Greek is begun later than Latin, and when the latter is well taught the former needs less time and effort for the mastery of so much as is desirable during the period of secondary instruction. Inasmuch as both serve practically the same purpose in education, they may properly be spoken of under a single head.

It seems quite safe to predict that no culture will ever be considered broad and deep unless it rests upon an understanding and appreciation of the civilizations of Greece and Rome. Whether such culture is necessary or even desirable for the great body of the population, and whether the classics are properly taught or not, are very different questions from that which is raised as to their educational value. It is only as respects one or the other of the former that recent criticism and attack have been in any degree successful. The classics have suffered from being forced upon those who cared nothing and would care nothing for them. They have also suffered, and very severely, through the waste of time they have involved. But both of these objections may be removed without weakening in any degree the position of the classics. To the charge of bad and wasteful methods of classical teaching, much of it done under the guise of thoroughness, the schools must plead guilty. They have been endeavoring to make philologists out of the material afforded by the average school-boy. The greatest value of the classics is found in the ability to read and understand the great poets, philosophers and historians who wrote for all time in the Greek and Latin tongues. The boasted discipline of classical study for the attention and reasoning powers may be quite as well obtained from studies which touch more closely the practical life of the great mass of the population. This argument is, therefore, not only unsound, but needless for the classicist to use since he has at his command



others that are stronger and more effective. To be in touch with the spirit of Sophocles, Demosthenes and Plato, of Cicero, Horace and Tacitus, and to understand the civilizations and the points of view that they represent, is enough to give the fortunate one a claim to culture. The wearisome grammatical drill and the tedious reiteration of details that are relatively of little value, save in so far as these are absolutely necessary to enable the pupil to read intelligently, are out of place in secondary education. The proper aim of the classical instruction at this period is stated with great clearness and force in the comments on the course of study furnished by the Prussian Minister of Public Instruction to the teachers in the most successful secondary school yet devised, the *Gymnasium*. The Minister says: "In regard to the end to be attained by a knowledge of language, it is hardly necessary to adduce arguments to justify the provision that the acquisition of a sufficient vocabulary be held to be of at least as much importance as familiarity with grammatical details. For it is especially through this firm possession of a vocabulary that satisfaction is gained as facility in reading is acquired, as well as through it that the interest in this reading extends beyond the period of school life. The aim of the *Gymnasium* is not, however, attained when the pupils are able merely to read works of a certain degree of difficulty. Emphasis is much rather to be laid upon the fact that they have read works of a certain scope and character, and how they have read them. As regards the method of reading, two points must be kept in mind; it must be based upon verbal accuracy and it must lead to an appreciation of the thought which is expressed and the form chosen for its expression. On the former consideration rests the disciplinary value of the classics, on the latter the basis of that which, when fully developed, is designated as classical culture. A treatment of this reading which neglects grammatical and lexical exactness, leads to superficiality; a treatment which makes the acquisition of grammatical and lexical exactness the main aim of reading, overlooks a fundamental reason for the teaching of Latin in the *Gymnasium*. Special attention must be called to this latter error, for it endangers both the interest of the students in the study of the ancient languages and the reputation of the *Gymnasium* among its most thoughtful supporters, by turning the teaching of the classics, even in the highest grades, into a mere repetition of grammatical rules and a memorizing of minute details as to synonyms and style." This applies to the United States quite as

well as to Prussia, and to the study of Greek as much as to that of Latin. When these directions are followed it will be easy enough to read considerably more of the classics than is now done in the secondary schools, and to do it in the time indicated on the schedule. It may also be observed that the grammatical details of different languages, when alike, should be studied once for all and not repeated for every new language taken up. Devices for carrying out this suggestion have been prepared under the form of parallel grammars and are now used in a few schools both in this country and in England. Greek, it will be observed, is prescribed only for the boy who looks forward to a college course, while Latin appears in the last three years of the scientific course as well, though with a reduced allowance of time. This is to indicate that even an intending Bachelor of Science should not be deprived of an opportunity to learn something of the ancient world. When desired, however, the pupil might well be allowed to omit Latin in the last three years of the scientific course and add the time thus gained either to German, natural science or mathematics. The employment of this option would really create a third course, without any Latin, for the last three years.

As a rule the classical teacher has not appreciated the changed educational conditions and the new demands made upon the schools. He has therefore provoked antagonism when he should have invited coöperation. He must recognize that while the secondary school cannot dispense with the classics, it can no longer be completely dominated by them.

7-8. FRENCH AND GERMAN.—These are indispensable in the secondary school, not merely as optional studies but as part of the regular curriculum. It was Goethe who said, "A man who knows only his own language does not know even that." To master a modern language it must be begun early and studied continuously. To some it may seem a matter of indifference whether French or German is first taken up. But French seems to offer more difficulties of pronunciation and idiom than German and should therefore be begun before the pupil has acquired very fixed notions of grammatical and rhetorical canons. Moreover the relation between French and Latin seems to furnish a good reason for making the two, to a certain extent, interdependent and illustrative, the one of the other. An ability to read, speak and write French having been attained, the mastery of a certain amount of German will involve

fewer difficulties and the boy may enter college or the scientific school with a good reading knowledge, and perhaps something more, of both of these indispensable keys to culture.

9. **DRAWING AND CONSTRUCTIVE WORK**—To introduce this subject into the secondary schools of this country is a new departure. It is so, however, only because these schools have not been doing their duty by the pupils entrusted to them. Taken together drawing and constructive work constitute what is properly called manual training, the educational value of which has been established beyond all contravention both by argument and by experiment. It aims to develop in the pupil those powers of thought-expression that no other study reaches, as well as to train the judgment, to call out the executive powers and to give self confidence in dealing with actual material. It serves also to illustrate much of the instruction in mathematics and in natural science. For four years it is prescribed for all students. After that the boys in the classical course discontinue this study, but those choosing the alternative course follow manual training further and with more especial reference to its scientific and technological applications. It may be added, for the sake of clearness, that the constructive work will naturally employ for its material paste-board, clay and soft wood successively.

10. **PHYSICAL TRAINING**—This important subject finds a place in every part of the course for obvious reasons. More time is allotted to it in the earlier years because at that time the pupil is less accustomed to the confinement of the school-room and to the strain of continuous mental exertion. At this stage, too, important physical habits are formed, for instance those of breathing, walking, sitting and so forth ; when formed they reduce somewhat the time necessary for systematic bodily training. Whenever possible this physical training might be given in the open air of a play-ground. Such an arrangement not only involves a change of surroundings and consequent rest for the pupil, but it means purer air in the lungs, purer blood in the veins and an accompanying exhilaration that is in itself a powerful tonic, mental and physical. A valuable and indeed indispensable accessory of physical training is play, the free, unimpeded, wilful activity of the child. So great is its value that many are of opinion that it makes systematic physical training unnecessary. On this point I shall merely quote Dr. Hartwell, of the Johns Hopkins University, who seems to me to have correctly expressed the relation between play and systematic exercise in his admirable address



before the Physical Training Conference held last November in Boston. Dr. Hartwell, in speaking of this matter, said : " I have no disposition to disparage athletic sports. I would that they were more general and better regulated than they are in our country. I believe that they are valuable as a means of recreation ; that they conduce to bodily growth and improvement ; and that their moral effects are of value, since they call for self-subordination, public spirit and coöperative effort, and serve to reveal the dominant characteristics and tendencies, as regards the temper, disposition, and force of will of those who engage in them. But they bear so indelibly the marks of their childish origin, they are so crude and unspecialized as to their methods, as to render them inadequate for the purposes of a thorough-going and broad system of bodily education. It is well to promote them, and it is becoming increasingly necessary to regulate them ; but it is unsafe and short-sighted to consider them as constituting anything more than a single stage in the best bodily training."

It is believed that a course made up of these ten lines of study, distributed substantially as indicated in the accompanying scheme, will meet all the intellectual wants of the boy from his eleventh to his eighteenth year and will afford him a harmonious and complete training. Whether the pupil enters an institution of higher grade or not, he will have had an education substantially complete in itself. Yet for the studies of a higher institution he will have received an admirable preparation. The secondary school is thus enabled to preserve its place in the general educational organization of the country without sacrificing its independence.

No less a man than Mr. Darwin has recorded the fact that his school days, so far as his education was concerned, were an utter blank. Not infrequently men of less reputation but yet prominent in their respective callings, express a similar opinion. This in itself is a danger signal and must be heeded. The school may not with impunity remain long out of touch with the spirit which animates the intellectual leaders of an age or generation. Its task grows more difficult as civilization grows more complex. " The most incessant occupation of the human intellect throughout life," said Mr. Mill in his Inaugural Address as Rector of St. Andrews University, " is the ascertainment of truth." The standards of truth and the methods for its discovery must be revealed in and by the process of education. When this process has been carried so far as to entitle

the resulting education to be called liberal, as Mr. Huxley for example has defined a liberal education, the youth is prepared to live not for himself alone, but for the society of which he forms a part and for the race of which he is a member. If the secondary school fails to obtain this larger view, its training will hardly contribute to an education which shall be, in the language of Rollin, "La source la plus certaine du repos et du bonheur, non seulement des familles, mais des Etats même et des Empires."

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*ASA GRAY.*

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PROFESSOR V. M. SPALDING, UNIVERSITY OF MICHIGAN.

Since the death of Dr. Gray, January 30, 1888, a succession of memorial tributes from colleagues and friends have appeared in scientific periodicals and the records of learned societies, but as yet no adequate recognition of the significance of his life as related to educational interests has found a place in the journals that may be understood to voice the sentiments of teachers and students who, all over the land, have looked up to him as the "Nestor of American Botany" and have drawn from him the inspiration that comes spontaneously from such a master and leader. It seems, then, no more than fitting that after a lapse of time sufficient to enable us to view in more perfect perspective his character and work, their most salient features should be presented in the form of a brief sketch to the readers of *THE ACADEMY*.

A farmer's boy in Oneida County, New York, spending his summers at the ordinary work of the farm, and in the winter going first to the district school and later to the academy in the neighboring town of Fairfield, he acquired the elements of an English education and afterwards attended medical lectures in the same place, receiving his degree a little before he was 21 years of age.

He never had a collegiate education, in the sense of taking a college course, yet in some way he early acquired the simple and exact English style, always characteristic of his writings, an accurate use of descriptive Latin, and such knowledge of the modern languages as

enabled him to keep in relation with the progress of botanical science.

His predilection for the science to which his life was afterwards devoted showed itself while he was still a student not yet eighteen years of age. A copy of Eaton's Botany came into his hands, and in the early spring he began with its help to find out the names and characters of the spring flowers of Central New York. There was no "Lessons and Manual" in those days and the first attempts of the young medical student did not always bring him the desired results, but he had even then something of the keen discrimination of relationships and the same loving enthusiasm for everything that grew out of the earth that afterwards characterized him through a long life time, and very soon the study of plants came to occupy all the time he could spare from his school duties. He soon became a teacher, in Utica and elsewhere, and in his vacations made botanical trips through New York and Pennsylvania, collected on the pine barrens of New Jersey, corresponded with such botanists as had made some progress with the flora of the Atlantic States, and finally became assistant, in the New York Medical School, to Dr. Torrey whose name will always hold an honored place in the annals of American botany.

By this time he had begun writing on botanical subjects, and was soon fairly launched on his career of scientific and literary activity. By the time he was twenty-seven he had presented various short papers to the New York Lyceum of Natural History, had partially written a work on the Elements of Botany, had undertaken a critical study and revision of several natural orders of plants, and, while waiting for the departure of the Wilkes expedition, to which he had been appointed botanist, was helping Dr. Torrey on the Flora of North America.

It was a little after this that he was appointed to the chair of Natural History in the University of Michigan, July, 1838, and in September following was voted five thousand dollars, a large sum in those days, which he was commissioned to spend in the purchase of books for the library. Going to Europe upon leave of absence, he selected the books, about 4,000 volumes in all, which for many years constituted the greater part of the University library. They were evidently selected with a conscientious regard to the needs of the various departments to be cared for, and it is a noteworthy fact that in the whole list less than half a dozen titles of strictly botanical



works are to be found. While in Europe he consulted the great herbaria of the Linnaean Society, the British Museum, the Jardin des Plantes and others, and made the acquaintance of such botanists as W. J. Hooker, Robert Brown, Lindley, Mirbel, Endlicher, and the De Candolles, and returned to America with a large acquisition of material for the Flora, of which he was now, by Dr. Torrey's invitation, to be joint author. He found the affairs of the institution in which he was still holding an appointment in an unsettled condition, and with such limited resources as to make it necessary to ask him if he would be willing to give up his salary for that year. To this he agreed and shortly afterward accepted the position in Harvard College that he honored until his death. It is not probable that the University of Michigan, in all its course of forced economy, has suffered another loss to compare with this.

It is impossible, within any reasonable limits, to give a just idea of the extraordinary comprehensiveness and variety of the literary and other work undertaken and completed by Dr. Gray during the half century of his productive activity. The text-books and manuals written by him have passed through so many editions and are so universally known and used in this country that there are doubtless many who know of him as a writer only through these more properly educational works. But these constitute so small a part of his productions that they are to be regarded rather as the light work of leisure hours, than as making up any considerable part of the more serious undertakings to which he devoted his solid days of toil. When some one who knew how important it was that he should be able to carry on his purely scientific work without interruption remonstrated with him for devoting his days to writing text-books, Dr. Gray replied, "I write them nights."

The list of his writings, as recently collected and chronologically arranged by his colleague, Professor Goodale, awaken a feeling of simple amazement.

Here are the articles in the "American Journal of Science," the first one in 1834, the last in 1888, descriptions of new plants, physiological observations, reviews, translations, botanical notices of all sorts, questions of nomenclature, and distribution and discussions of various problems, and all of these with a clearness and simplicity of style and consideration for his readers that have characterized very few scientific writers to such a degree.

This is only one journal. Besides this we find corresponding original papers, critiques, reviews and notices of various kinds in the *Annals of the New York Lyceum*, the *Proceedings of the Boston Society of Natural History*, the *North American Review*, the *Memoirs of the American Academy*, *Proceedings of the American Association*, the *Smithsonian Contributions*, *Proceedings of the Philadelphia Academy*, the *American Naturalist*, *Torrey Bulletin*, *Botanical Gazette*, *Science*, and various other home periodicals, and from these quoted or reprinted in various foreign publications, the whole including such a comprehensive and judicious treatment of nearly every subject of current botanical information as to furnish, to use Professor Sargent's language, in reference more particularly to the reviews, "the best account of botanical literature during the last fifty years that has yet been written." His great work, as is well known, was the *Flora of North America*, upon which he was well at work when a young man of twenty-eight, and was still engaged just half a century later, when the night overtook him and he left its final completion to other hands.

Few except professional botanists can form any just appreciation either of the magnitude or importance of this great undertaking. It involved the comparison, identification and description of some ten or twelve thousand species of plants, from all parts of the national domain, from Alaska to the Florida keys, gathered by travelers, explorers or adventurers as the case might be, the original types scattered through several European herbaria, the critical comparison of which with the new material was absolutely essential and involved repeated visits to Europe while the work was in progress, with no special fund set apart to meet the inevitable expense, and no herbarian except as he created it, with other and sufficient professional duties pressing upon him, yet with a courage worthy of the conqueror of a new empire, as he really was, the gigantic work was taken in hand.

Repeatedly during its progress the national boundary was extended, new surveys and explorations brought new and ever increasing additions and with them the demands of a large and exacting correspondence, until from sheer superabundance of material, publication had for a time to be suspended; yet the work was never given up, and to the very end of his long life its author worked on, patiently changing whatever had to be changed in the light of new discoveries, elaborating slowly but surely one order after another, and never turn-

ing out any part of it as done until it showed the final touch of the master.

Bear in mind, too, that it was begun when species were thought of as being "like coin from the mint, or bank notes from the printing press, each with its fixed marks and signature, which he that runs may read, or the practical eye infallibly determine," while in later days came the widely different view, so clearly expressed by Dr. Gray, that "species are judgments—judgments of variable value, and often very fallible judgments, as we botanists well know. Judgments formed to-day," he goes on,— "perhaps with full confidence, perhaps with misgiving,—may to-morrow, with the discovery of new materials or the detection of some before unobserved point of structure, have to be weighed and decided anew." . . . . "You see," he adds, "how all this bears upon the question of time and labor in the preparation of the Flora of a great country. If even in Old Europe the work has to be done over and over, how much more so in America, where new plants are almost daily coming to hand. It is true that these fall into their ranks, or are adjustable into their proper or probable places, but not without painstaking and tedious examination. Of our Flora it may indeed be said, that 'If it were done, when 'tis done, then 't were well it were done quickly.' But I may have made it clear that in the actual state of the case, it is likely to be done slowly. At least you will understand why thus far it has been done slowly." And we may add that all botanists in all years to come will thank him that it was done thus slowly and conscientiously, becoming a piece of monumental work, "an everlasting possession." It remains unfinished but is approaching completion in the hands of those who knew his mind and shared his instincts and methods of working so fully that it will always and throughout be what for half a century it has been in the making, Gray's Flora of North America, the greatest single piece of scientific work, at least within the limits of National History, thus far carried out on the American continent.

A single one of the purely scientific questions to which his attention was given must be referred to at sufficient length to show its relation to the great problem which in later years occupied so prominent a place in his thoughts.

It was his original study of plant distribution that, more than anything else, gave to Dr. Gray his real standing in the scientific world as a philosophical botanist.



As early as 1840 Dr. Gray called attention to the fact that the flora of Japan "presents striking analogies to that of the temperate parts of North America." He offered no reason for the resemblance but contented himself with leaving the fruitful idea to grow, merely expressing the hope that on some future occasion he would be able to make a somewhat extended comparison between the flora of temperate North America and that of Japan and Middle Asia.

It was not until 1856 that he published a paper in the *American Journal of Science* directly discussing the subject of the distribution of plants, referring again to marked resemblances between the floras of Northeastern Asia and Northeastern America and again putting off extended comparisons until he could have the opportunity to study some recent collections that were expected to throw light upon the subject.

Finally, in 1859, he published in the *Memoirs of the American Academy* the famous paper on the Flora of Japan in which he brought forward, to use his own words, "the fundamental and most difficult question remaining in natural history—the question whether the actual geographical association of . . . nearly related species is primordial and therefore beyond all scientific explanation, or whether even this may be to a certain extent a natural result." Referring to two recently published papers of Mr. Darwin and Mr. Wallace, he goes on to say that "the views there suggested must bear a prominent part in future investigations into the distribution and probable origin of species," and adds, "I am already disposed . . . to admit that what are termed closely related species may in many cases be lineal descendants from a pristine stock, just as domesticated races are."

This was Dr. Gray's first public statement of the fact that he was now ready to accept upon proper evidence the doctrine of the derivative origin of species, though he had expressed much the same view some years before in private correspondence.

He never receded from the position he had taken as the result of his own independent investigations, and becoming more and more convinced of its truth, he was among the very first to accept the Darwinian hypothesis of evolution and to speak out clearly and openly in its favor, cautiously at first, but with more and more confidence as the accumulation of evidence approached more nearly to demonstration.

And there was need of just such help as he could give. It is not easy for us, at the safe distance of an intervening generation, to estimate how much it meant. There were very few men who when the "Origin of Species" appeared in 1859 were fitted either by special study or otherwise to give the argument, an intelligent hearing and candid judgment. Mr. Darwin felt this keenly, and his recently published letters show how eagerly for a period of several years he watched for every criticism and every expression of approval from the three men for whose judgment he repeatedly declared that he cared most, namely, Lyell, the geologist, and the two botanists, J. D. Hooker and Asa Gray. There was hardly a zoölogist of reputation upon whom he could depend. True, Huxley was there, but Darwin was in no haste to have the victory gained by a mere battle of words, and Agassiz, whose name carried more weight than a legion of such debaters, opposed the new doctrine with all the force of conviction and will combined. To him, as to the great majority at that time, evolution meant too radical a change of conception of the whole creation to be tolerated for a moment, and practically the case was ruled out before the hearing was given.

No wonder we find in Mr. Darwin's letters to the few men who were able to understand his argument and candid enough to admit its force, an occasional outburst of personal appreciation. To Dr. Gray he wrote in February, 1860: "Your review seems to me *admirable*; by far the best which I have read. I thank you from my heart both for myself, but far more for the subject's sake." And again, later in the same year, "you are more than *any one* else the thorough master of the subject. I declare that you know my book as well as I do myself, and bring to the question new lines of illustration and argument in a manner which excites my astonishment and almost my envy..... Every single word seems weighed carefully, and tells like a 32-pound shot."

It is exceedingly interesting to follow the correspondence of Darwin and Gray through the early period of the revolution that in a few years had carried with it the all but universal judgment of the scientific world. The extreme caution of Professor Gray until fully convinced, and the anxiety that Darwin felt to have him see as he himself did, and yet still greater anxiety that this should be the result of direct personal conviction, came out in their letters again and again. Yet these give but a partial view of the relation of Dr. Gray to nearly every portion of the work that has been more immediately

associated with Darwin's name. We are told by one who was first a student and afterwards a colleague of Dr. Gray that "many of the problems upon which Darwin was at work were those in which Gray was most interested ; and he was often able to aid Darwin by his observations, and still more by his judicious and always acceptable criticisms. While the naturalist at Down was absorbed in the study of climbing plants and cross-fertilization, the green houses at Cambridge were also used as nurseries for the growth of climbers, and the odd, irregularly flowered plants which ought to be cross-fertilized," and the same writer recalls the time when Dr. Gray hardly ever passed in or out of the Herbarium without stroking—patting on the back by way of encouraging them it almost seemed—the tendrils of the climbers on the walls and porch ; and when, on the announcement that a student had discovered another new case of cross-fertilization in the Garden, he would rush out bare headed and breathless, like a school boy, to see the thing with his own critical eyes." How ready he was to communicate whatever new facts came to light and how highly prized all such contributions were is constantly manifest in the correspondence and in the published works of Darwin. The two men were so far alike in their treatment of such material that the question of priority apparently never troubled either of them. Darwin after working twenty years on the *Origin of Species* would have quietly left Wallace to publish in advance of him, had it not been for the wishes of two or three friends, and Gray, in his first great paper on *Distribution*, gave the credit to another botanist for the essential idea in it. Both Gray and Darwin understood as well as most men that "it is worth a life-time to get a new idea," but with the magnanimity of real greatness, both seemed to take a special delight, as one has said, in finding out that the same idea had already occurred to some one else.

From 1855, when this correspondence began, to the end of their lives these two worked on, always in personal sympathy; and always holding essentially the same views with regard to the great principle of organic evolution, but to the end differing radically on certain fundamental questions intimately connected with it. With characteristic directness and force, Dr. Gray brought out in various papers, and finally, in the well-known one on "*Evolutionary Teleology*," the fact that natural selection does not account for variation, and showed how powerless the theory that had explained so much was to explain the rest. He held without a shadow of doubt to



the belief in design in Nature and to its perfect compatibility with the principles of evolution as held by himself and Mr. Darwin. Holding this view, he went farther, and in no doubtful language stated his acceptance, not only of the theistic conception of the world, but of Christianity, and even his adherence to one of its simplest but most comprehensive creeds.

In the Yale lectures, having with a masterly hand sketched the arguments for the evolutionary hypothesis, he said: "I accept substantially the same views. I have no particular predilection for any of them; and I have no particular dread of any of the consequences which legitimately flow from them, beyond the general awe and sense of total insufficiency with which a mortal man contemplates the mysteries which shut him in on every side. I claim, moreover, not merely allowance but the right to hold these opinions along with the doctrines of natural religion and the verities of the Christian faith."

It might well happen that one whose energies were given so largely to the advancement of pure science, and at the same time to so many other exacting duties should not have been conspicuous as a teacher. And yet it is just here, and particularly in what he did to bring his science to the schools and to the people that he is best known, at least throughout the United States. Teaching and the preparation of text-books really occupied, as has been said, a relatively small part of his time, and yet if he had left no other work behind him, these alone would have constituted the record of a most useful and honorable part in the educational work of this country. His strictly educational works, the "Lessons and Manual" and others, are too generally known to require special mention. With regard to these it is perhaps sufficient to quote the words of his colleague, Professor Farlow, a man of most critical judgment, who says: "Occasionally some over-wise person has discovered that certain plants grow a few inches taller or bloom a few days earlier than is stated in the 'Manual'; but the botanist is yet to be born who could write a more clear, accurate, and compact account of the flora of any country."

It is impossible to gather together within reasonable limits the expressions of love and respect that have come from the students of Professor Gray, now the teachers of botany all over this land, as they have attempted since his death to tell of what he was to them as a teacher. One of them says, had he "been a man of but medium attainments, his transparent and unselfish goodness would alone

have made him a model teacher, whose example and whose memory a student must have revered to the end." Another writes: "There was an air of simplicity and straightforwardness without a trace of the conscious superiority or the pedantic manner which so often accompanies learning, so that he seemed to be one of us, a student among students," but at the same time "he was sure to criticise what he believed to be wrong," and one of his students now a professor in a neighboring State University, recalls writing his first scientific paper for Dr. Gray not less than six times before it was allowed to pass. "I have no doubt," says Professor Rothrock, "he sighed more over having to take time to re-read it, than I did over having to re-write it; but, though to him lost time, he was good enough to regard it as a duty, and as such he did it. His character as a teacher came out in the fact that he did not allow it to pass. It was this disregard of his own time when a duty to a student was apparent, which places him now so high in the esteem of scores of pupils."

It need not be said that such a man had friends. When his seventy-fifth birthday came, the botanists of the whole country, as by a spontaneous impulse, sent to him their fraternal greetings. A beautiful silver vase upon which were wrought the flowers and leaves of many plants associated with his name was placed upon his table in the morning, and on a plate, with cards and letters from those who had shared in the gift, were engraved the words: "Bearing the greetings of one hundred and eighty botanists of North America to Asa Gray, on his seventy-fifth birthday, November 18th 1885."

It was characteristic of his untiring devotion to the Flora that even on this day he went on with his self-appointed task, reserving for the evening the pleasure of reading the messages of his friends, but on the following day acknowledging in his own most felicitous words the "full flow of benediction from the whole length and breadth of the land," which he said was "as unexpected as it was touching and memorable."

Naturally enough many honors came to him in the course of his long career as teacher, investigator and author. He was a foreign member of the Institute of France, one of the "immortal eight" and also of the Royal Society of London, and a long list of learned Societies of Europe and America had honored themselves by making him a member. He had received the highest degrees of the great English Universities, had been president of the American Academy,

and was welcomed as a familiar friend at the homes of many of the best workers in science the world over.

He had no aristocracy of birth. There seem to be no records accessible by which his lineage can be far traced; but he belonged by every mark and lineament, by his vigorous physical endowment, by his clear thought and speech, and by every token that indicates nobility of soul, to the ranks of the good and great. Of the many words of affectionate remembrance that have been spoken or written within the last two years by friends, associates and pupils, none, perhaps, express more truly what all felt than these: "Think of him in what relation we may, he stands out in strong light for inspection, the picture of a 'manly man.' Was he without fear? It was because he was without reproach. If to the last his cheerfulness and mental buoyancy amazed even those who knew him best, it was because the elasticity of his love to God and man enabled him to reach beyond the limits which age usually imposes, clear into the sunlight of eternal youth."

He has gone from our midst, but his work remains, and his name and memory come to us like the breath of the flowers he loved. "To such as he there cometh certain immortality."

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### *ANGLO-SAXON IN THE HIGH SCHOOL.*

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We are all aware that during the past ten years there has been a steadily increasing interest in English studies in the common schools and universities of the country. An underlying cause is found in the general complaint that boys finishing the classical academies and high schools have come to the university doors unable to acquit themselves creditably in the composition of a single English paragraph.

This fact is of so great importance that I venture to offer a few evidences, not from professors of English alone, but from presidents of our leading universities.

We all remember President Eliot's statement that Harvard University is obliged to do merely elementary work in English, owing



to the small attention paid to it in the preparatory schools. Professor A. S. Hill, in *Harper's Magazine*, June, 1885, says 'that he has read from four to five thousand compositions written in the examination room, upon subjects drawn from books which the candidates were required to read before presenting themselves, and that at a generous estimate not more than one hundred were creditable either to writer or teacher.' He goes on to say that instructors in English in American colleges have to spend much time and strength in teaching the A B C of their mother tongue to young men of twenty.

Not over a month ago Professor Demmon of our own university told me that university students knew almost nothing of English Grammar, and that they could not read understandingly Whitney's "Essentials." President Porter, in his *American Colleges*, joins in the universal complaint as follows:—"The neglect of such culture (elementary English) in too many of the so called classical schools of this country is inexcusable."

Professor Hunt, of Princeton, adds his voice: Applicants are annually appearing from our "best schools," who, in the press of classical and mathematical work, have scarcely opened the pages of an English Grammar; who know next to nothing of American history, and who, after all their preparatory language study, are unable to construct a correct and forcible English paragraph.

Mr. Fitch, in his *Lectures on Teaching*; Mr. Hales, in his *Essays on a Liberal Education*, catch up the strain in reference to the preparatory schools of England.

Would that the Father of English Poetry, who two hundred years before Bacon translated his essays into Latin to preserve them, entrusted the rich products of his genius to his native speech,—would that he were living to gather up these voices in a noble Complaint to the Mother-tongue, that her children in the nineteenth century are disinherited, and are losing their faith in the rich Anglo-Saxon blood.

Along with this awakening to the necessity of better instruction in English comes a similar interest in the Natural Sciences and Modern Languages. Wherever our sympathies may be, the facts are before us that the Natural Sciences and Modern Languages, pre-eminent among them the English, are pressing for recognition along beside the Classics and Mathematics, as studies of equal disciplinary, culture value. For myself, I am frank to say that for the boy and girl who do not intend to go to college,—and our high

schools are largely made up of such,—my sympathies are entirely in favor of this modern movement. The world is to be about these youth with its manifold forms of life and beauty, a joy forever. Sad pity is it if they are sent forth, as the writer was, without one hour's instruction in Astronomy, Chemistry, Botany, or Physiology. Their native language is to be their sole instrument of power, but in case of the select few who go to the universities, the vernacular seems to be anything but a powerful instrument.

We urge, therefore, by way of farther introduction to our topic, that in behalf of the large body of our youth, the English course should be made the strongest course in the High School, and as a means of strengthening it we suggest among other revisions the introduction of an elementary course in Anglo-Saxon. Lest the objection be raised that the school curriculum is already overcrowded, let us roughly outline our ideal English Course. It should contain as much of Natural Science as the Scientific Course; its mathematics should consist of a review of Arithmetic and an elementary course in Algebra and Geometry; a year and a half, or at the outside limit two years, being devoted to Mathematics. Its literary and linguistic instruction should be confined mainly to English and American literature and history. General History, of course, should find a place, and possibly the latter half of the Junior year might profitably be devoted to the study of great masterpieces from other languages, in translation. The English speaking student should know that the great masterpieces of all nations lie open to him through his own vernacular. We live in the age of translation, and "What is really best in any book is translatable," says Emerson, "any real insight, or broad human sentiment." A scholar in many languages, he speaks these encouraging words to the High School boy and girl: "I rarely read any Latin, Greek, German, Italian, sometimes not a French book in the original, which I can procure in a good version. I like to be beholden to the great metropolitan English speech, the sea which receives tributaries from every region under heaven."

Such a course would give time for nearly four years of steady work upon English, and should enable every student to become a tolerably good English scholar. In the ninth grade English Grammar might be dropped, to be reviewed later in the course; and the entire year be devoted to Anglo-Saxon, appropriate exercises in word study, and English composition based upon such exercises as Abbott's "How to Write Clearly." The Anglo-Saxon would prove

difficult, no doubt, but not a whit more so than the first year of Latin. Sweet's Primer, supplemented by judicious help from the instructor could certainly be mastered in this grade as easily as Jones's "Beginning Latin Book."

For years we have felt that the simplest means of understanding the relations of words in sentences is through a synthetic language like the Latin. In the sentence, "And thus the son the fervent sire addressed," our English leaves us in the dark as to whether the son addressed the sire, or the sire the son. A glance at the Latin sentence would make the meaning clear, but the same is true of the Anglo-Saxon; it is an inflected language, and we no longer need to leave the mother-tongue to gain the well recognized advantage of a synthetic language in teaching Grammar. It is a fair question also whether such a course as has been outlined would not furnish a discipline quite equal to that of the elementary study of any foreign language. The nouns of the Anglo-Saxon, with five cases and four declensions; the rich inflection of its pronouns, personal, demonstrative, and interrogative; its adjectives declined in three genders and two numbers, definite and indefinite like the German; its verbs in six conjugations, governing sometimes the accusative case, again the genitive, the dative, the instrumental, the accusative and genitive, or the accusative and dative; its set of rules for the Subjunctive Mode, "rivalling," as Professor March puts it "those of the Latin and Greek as apparatus for mental gymnastics,"—what more does one need for disciplinary, linguistic study! Moreover, at every step of the way the knowledge gained is to throw light upon English Grammar and the critical study of English Literature in the last two years of the course. English, a mixed language as to its vocabulary, is in no sense borrowed or mixed as to its grammar, and no scholarly knowledge of its grammar can possibly be acquired except through the Anglo-Saxon. And yet the remark is not uncommon that English is to be taken as you find it, and its constructions to be explained by a careful exercise of the judgment. This careful exercise of the judgment tells one person one thing and another just the opposite, giving rise to endless discussions over points which can be determined only by reference to the historical development of the language. Inquiry was recently made of the publishers of Sweet's Primer in regard to the interest in Old and Middle English in the secondary schools of the East. The writer was referred to a teacher in New York said to be deeply interested in English



and thoroughly acquainted with the work in the schools. Information came that the New York high schools are entire strangers to Anglo-Saxon, and that there is no intention of introducing the subject! The most interesting of the reasons given was, that "The light thrown by Anglo-Saxon on present usages, idioms, constructions, and meanings of words appear as faint as those rays cast upon our earth by some distant planet." If those who have been set as lights upon a hill are guilty of such statements, surely the discussion of our topic is timely: for whether Anglo-Saxon be taught directly in the secondary schools or not, there is manifest need of familiarity with it on the part of all those who are *teaching* English.

Let us exercise our judgments on a few forms in Middle and Modern English. In Chaucer's "Knightes Tale," Creon, moved to pity by the lamentation of the women of Thebes, was sad at heart.

"*Him* thoughte that his herte wolde breke."

Upon the following page, describing Creon's attack upon Thebes to revenge their wrongs, we have,

"Til that he cam to Thebes, and alighte  
Faire in a feeld, ther as *he* thoughte fighte."

The judgment brought to bear upon the forms, *he* and *him*, both apparently subjects of the same verb, "thoughte," might conclude that Chaucer used the nominative and objective indiscriminately as subject. But even the student of Sweet's Primer remembers the two verbs, *thencan* and *thyncan*, to think and to appear, the one taking a subject in the nominative, the other used impersonally with the dative. In line forty-seven of the Prologue [Morris's text, Prologue and Knightes Tale], the Knight is praised as "Ful worthy in his lord-es werre," the *es* giving rise to the apostrophe and *s*, the so called sign of the possessive case in Modern English. But the young squire is described as hoping to stand in his lady's grace, by the phrase "in his lady grace" (Prologue l. 88), and the genial host of the Tabard, seeking a mild oath, swears "by my fader soule (Prol. l. 781). The judgment has no room for exercise in explanation of these forms, but our student of the Anglo-Saxon Primer comes to our relief with his declension of feminine nouns, and a few masculines in *r*, none of them taking an *s* in the genitive. Examples, both in syntax and etymology, might be given without number, as we all know; and I suppose Chaucer is taught in most of our High Schools.

Let us turn to modern English, however, and see how 'faint are the rays cast by our distant planet.' In the grammar we use at the Normal School, in many respects an excellent book, we read that the participle may be used as principal word in a prepositional phrase, or may be the principal word in a phrase used as subject or object. In the sentences, "We receive good by doing good," and "Your writing that letter so neatly secured the position," *doing* and *writing* are called participles; but the student who has gone but a little way in the study of Historical English Grammar, will tell you that participles are always verbal adjectives referring to some substantive in the sentence, and that the forms in *ing* in the foregoing sentences are verbal *nouns*, or gerunds, or infinitives in *ing*. Under the treatment of the subjunctive mood, in which reasons are required for its use, the following sentence is given: "Govern well thy appetite lest *surprise* thee." The only light the student gets upon the form, *surprise*, is that "if, though, lest, unless, etc., are usually spoken of as signs of the subjunctive mode;" or the author seems to get rid of the subjunctive mode entirely by saying that it may be treated as an infinitive completing an omitted auxiliary. The primer-students of Anglo-Saxon, however, remember that after verbs of commanding, desiring, etc., the subjunctive is used to express purpose; and he does not hesitate to call this by its proper name, a subjunctive of purpose after a verb of commanding, or exhortation. In the short sentence, "The older he grew the wiser he became," the judgment plays about the word *the*, and finally satisfies itself by saying that the article seems to be used adverbially here. But the primer-student casts a dim ray of light upon the construction by declining for us the old demonstrative pronoun. He finds the form, the (A. S. *thý*), to be an instrumental dative, corresponding to the Latin ablative of degree of difference, *eo magis, quo melius*.

In "The brass is a forging," our distant planet casts its little beam upon our metallic subject and lights up the whole sentence. The letter *a* is seen to be a contraction for the preposition *in* or *on*. It has lost its *n* and finally disappears entirely in such constructions as, "the house is building." In the opening lines of Julius Cæsar:

"What! know you not,  
Being mechanical, you ought not walk,"

the "ought not walk" calls up the history of the English infinitive. Why is the *to* omitted here? How did *to* become the so-called sign of the infinitive? Why do we spell the first syllables of woman and

women the same, but pronounce them differently? Why does the little word, root, meekly conforming to the general rule, add an *s* to form its plural, while foot, the natural "kicker," succeeds in rebelling and standing on its own *feet*?

But lest we overwork our little planet, let Prof. F. A. March speak a few words for us:—"Almost all our grammatical forms are Anglo-Saxon. The difficulties of our language, whether in spelling, or the irregular formation of modes and tenses, or of plurals and genders, or in the peculiar combinations of syntax, are almost all to be referred to Anglo-Saxon, and most of them are there easily understood; they are now difficult because they are relics of habits and forms which have passed away."

In the German Gymnasia all students have for years been called upon to study the vernacular in its historical development, and during the past five years there has been considerable discussion as to the relative importance of Old High German, and Middle High German. If such study is of value to the student of Modern German, how much greater the necessity in the case of Modern English, stripped almost entirely of the old inflections and rich in idioms descended from the old speech.

We have suggested that the elementary course in Anglo-Saxon should be followed by exercises in word-analysis and in composition. The average English student makes but sad work in studying the derivation of words in the dictionary. This ought not so to be. His brief study of Old English will have formed an admirable preparation for the study of some such little book as Haldeman's *Word-building*. Other books of which I have seen notice, but which I have not examined are: Gibb's "*Teutonic Etymology*," New Haven; Sargent's "*School Manual of Etymology*," Philadelphia. In these books, I understand, the pupil is told the meanings of certain Anglo-Saxon words, prefixes and suffixes, and of English words which are derived from them, and exercises are arranged in which to acquire skill in the ready use of this knowledge. They are intended for the Common School, and a "treasury of this branch of learning" for the teacher is found in Holdeman's "*Affixes*," Lippincott, Philadelphia. One might easily add a short list of Latin roots that appear in words frequently met with and used by the student, and so prepare him for a reasonably intelligent use of Skeat's "*Etymological Dictionary of the English Language*." Recollecting that the words used in earliest childhood, our agricultural terms, the ordinary terms of traffic,



indeed, four-fifths of the words upon an ordinary page of English are pure native words, we can hardly overestimate the value of this critical study of the vernacular for boys and girls who are to close their academic life with the High School. Etymological study may be overdone, of course, in teaching literature, but it has its place in the hands of a judicious teacher, and will yield results to be secured in no other way.

It seems to me well, also, to lay the foundation at the beginning of the high school course. Then throughout the three years to follow, time may occasionally be taken for the same patient and critical study of an English classic as our classical students are familiar with in the study of foreign languages. Such a study of Craik's "English of Shakespeare" in connection with Julius Cæsar, ought to add to the rapidity and enthusiasm with which other plays can be read. May we not, thus, lead our youth into using words in their representative sense; when they have a thought, to express it in plain English and be done with it. For several years I have had to look over many essays and orations of young men and women of good average ability. Two faults are frequently to be met with: a vague idea of the exact meanings of words, and an elaboration of little thought into high-sounding periods, as if composition were a sort of gymnastic exercise for the tongue rather than the brain. Nor is the malady merely a local one. President Angell told me a few years ago that he was asked to look over a dozen speeches and to award the prize in an intercollegiate contest. Of all the bombastic rhodomontade he had ever met with, those speeches capped the climax. Thomas Wilson's complaint in 1553 comes to mind. Expressing his contempt for the "ink-horn" terms so greatly affected in his time, he says: "Some seek so far for outlandish English that they forget altogether their mother's language, and I dare swear this, if some of their mothers were alive they were not able to tell what they say."

Might it not be well to set our young men and women to learning short lists of old Anglo-Saxon words. Member, as applied to the body, is a delicate foreign term, but leg is Anglo-Saxon; and so are ear, eye, hand, foot, lip, mouth, teeth, hair, finger, and nostril. Emotion, a general term, foreign; but the feelings common to all our hearts spring to our lips in the language of our fathers; love, hope, smile, blush, fear, sorrow, weep, sigh, and groan.

Yes, I am persuaded that a final fruit of this glance at the old speech might lead to a more manly and vigorous expression of

thought. Along with its simplicity of style let the boy and girl learn something of the rugged strength of his fathers. Let him hear Beowulf's sword-fellow, unchristianized, without hope in the hereafter, cry out from his noble soul:—"Death is better than life of shame." Yes, let every English American youth thank God that he is descended from that plucky race that under Danish invasion, and Norman conquest and contempt, clung with unyielding tenacity to the native speech, and bequeathed it to him, his richest inheritance in the nineteenth century.

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*NOTES ON THE NEW EDITION OF GOODWIN'S  
GREEK MOODS AND TENSES.*

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CASKIE HARRISON.

I.

These notes will be devoted to strictures. Dispraise is not the guerdon of the work; but strictures form an integral part of criticism, important in proportion to the importance of their subject. This edition greatly enhances the reputation of its precursors, and its merits are sure of the amplest commendation; still, it has not even yet outgrown a certain fundamental narrowness and irrational reserve, with certain errors and inconsistencies of application.

This is not an age of syntax; the history and comparison of forms and sounds are the gods of our scholars; meaning and interpretation beyond what may be incidentally assumed from rudimentary reminiscence, have few worshippers. The expressed opinions, the actual instruction, the published work of our professors and teachers; the programmes of electives and graduate-courses in our leading colleges; the lists of papers read before The American Philological Association—about one in seven being syntactical; the conceptions and valuations of the several aspects of classical study acquired even by honor-men in our universities—hardly one in a hundred of whom appears to have heard whether there be any syntax beyond the school-manuals; the blunders from which "comparative grammar"

has not saved some of our very few aspirants in syntax; the ease with which crudity and superfluity find a place in our journals—all these go to show that “fondness for syntax” is not a characteristic of American scholarship. If “fondness for syntax” were, as it ought to be, a characteristic of American scholarship, we should not have a maker of books teaching contradictory doctrine in companion-volumes, elaborated prolixity of detail in demonstration of ancient doctrine; if “linguistic science” found amongst us its true complement in “fondness for syntax,” we should not have absurdities removed and retained at the same time by a simple change from text to foot-note; we should not have waited so long for this new edition, and Gildersleeve would long ago have had his deserved preëminence.

As it is, since the facts of syntax cannot be understood or imparted without some theory of syntax, the helpless teacher or writer is forced to ignoble confession or to brazen artifice, while the showers of applause that greet the rare author's last revision is the very same that exhausted its vocabulary of panegyric over the views he has since abandoned as false. If Allen and Greenough's Latin Grammar had not suffered from overpraise and mispraise at the hands of those who of themselves ought to have seen, and who by position ought to have exhibited, its obvious and self-perpetuating weaknesses, not even its publishers could have made its success so great; and the fact that the book, in the hands of a safe teacher, is really so available is only a stronger reason why it should be relieved of peril to the unsafe and inexperienced. At an interval, very much the same may be said of Goodwin's Syntax.

## II.

This revision is notable, chiefly because of its author's conversion; like Saul, he has seen a great light, and he preaches it. Till now severely practical, he has grown through practice to theory, and he joins the band of these prophets. True, he is not a full-fledged philosopher; that he will never be; his philosophy is not a natural, but an acquired, taste; but the changed mind and heart atone for all negligences and ignorances. That Professor Goodwin, whose fame is indissolubly connected with the conditional sentence, should, for so many years, have considered his indebtedness to Gildersleeve adequately settled by the forgotten foot-note in *The Transactions*, is now less a marvel than that he should ever have allowed himself to be and to remain in such sympathy with, and under such obligations



to, a man of such different mould. Amidst the labored indifference, not to say the studied disapprobation, with which New England and the East have viewed Gildersleeve's work, this declaration of Professor Goodwin's is like the eruption of an unsuspected volcano. Those who fully estimate what his acknowledgment implies may pay Gildersleeve the tribute of quoting his imperfect as the "tense of disappointment," and say "*Hic aderas!*"

### III.

Professor Goodwin is the highest type of New England scholar, and the general justice of his domestic and foreign reputation is cheerfully conceded everywhere. But the chief merit of the mind he typifies is simplicity, its chief result is availability, qualities no way incompatible with lack of depth in interpretative insight. Complete classification is not a characteristic of the mind he represents; the leading characteristic of that mind is pursuit of the practical, which often mistakes clearness for truth; and the practical man too often proves himself inferior to the theorist by having his work to do over. To such a mind, given a genus naturally falling into five species, the New England grammarian will probably see and note only three; and, in his examples, he will give two instances of each of two species, and omit illustration of the third; or he will word his principle so that no one of his examples necessarily applies.

Professor Goodwin's books have been justly praised in England; but it must be remembered that the English are particularly deficient in grammatical sense; and the tribute of one of their great weekly reviews to the second edition of *The Moods & Tenses* as virtually a "treatise on logic and the science of language" must have seemed premature even to the flattered author. Simplification no more implies profundity than common-sense implies learning or the power to teach; in fact, simplification is obstructed by the very fulness of knowledge and by the breadth of a total view, and it can often be obtained only by the discounting or even the subversion of the truth. This is why the greatest scholars cannot make the most available books; their presentation, in satisfying themselves, becomes inaccessible to those for whom it is intended, and is overlooked by those who would profit by it. In point is Gildersleeve's Latin Grammar—the best, and almost the only original, work on Latin Syntax in English, but the most impracticable for the age usually concerned with grammar.

IV.

Professor Gildersleeve, the high-water-mark of American scholarship, is the very opposite of Professor Goodwin. To learning as great, he adds a magic versatility of cognizance and apprehension and sympathy almost unparalleled; the acutest feeling for grammatical subtleties, the most infallible power of interpretation, and the most felicitous gift of expression; a vital touch with all phases of modern life, and a delicate or a playful familiarity with ancient men and times; which combine to render him a unique figure in contemporary scholarship. And yet he has not enjoyed the recognition and the homage due to such a position. How far this aloofness is due to his personal and professional attitudes may be a question; but, a certain *succès d'estime* left out, the fact remains that, in the country at large, he has been for the most part ignored and mistrusted. To a just mind, this is marvellous, but not more marvellous than that none of Gildersleeve's favored and favorite pupils seem to have caught his spirit and been called to missionary service in the cause of his ideals; not more marvellous than that the very journal to which Goodwin is so profusely indebted should, for ten years, have found it hard to live for the men who will now, of course, admire his revised views. When Professor Goodwin transcends the circle that has sometimes to some of us seemed a mutual admiration society, if not an organized propaganda, to glory in studying pages that so many boast of leaving uncut, in learning from a man whom his neighbors under their breath call fantastic, while they fear him so wholesomely, I deem it a worthy date for the new hegira from the bugaboos of the practical and the scientific; and his willingness to confess so much in behalf of his only possible rival—a rival, too, likely to be advanced greatly in general repute by his endorsement—is a fitting text for the new dispensation.

V.

To discuss in detail all the exceptions that may fairly be taken to this revision would far exceed any space and time at my command. I purpose to consider at relative length the general criticisms I make, and then indicate briefly such individual cases as they include.

Professor Goodwin discloses his unsymmetrical way of looking at things in the very beginning: he does not define verb, and proceed to explain how interrogative and imperative forms really assert; and he does define mood, resting satisfied in traditional vagueness; and,

coming to tense, he defines that idea with no new felicity. The individual moods he does not define; on the contrary he merely catalogues a number of unequally significant uses, wherein no historical claims can atone for the logical obscuration. Though it does not appear from the new preface, he is evidently still under the domination of the scientific scare, whose demands for accuracy he recognizes to an extent beyond his power to meet. But it is not lack of accuracy, lack of comprehensiveness, lack of brevity, that he seems to have in mind; the only warning that can fairly be drawn from the "numerous unsuccessful attempts" is the difficulty of making definition self-explanatory, which, however, is no absolute condition of definition; if it were, science could not live or move; and Semper's colossal definition of the "conditions of existence" ought to be consolation enough for any definer who is not reconciled to his lot by the summary disposal of heat as "a mode of motion." If physical science, with its advantages of concreteness, objectivity, mechanism, and symbols, has even occasionally to rest in such definitions, I think students of disembodied function need not fear her criticisms on their formulae. Till science establishes all her claims and claims only what she has established—till she becomes logical enough to remember that her special processes were logic's before they were appropriated by science, and to make her votaries conform to logic, whether they become scientific or not, fear of her demurrers is altogether gratuitous. It is entirely possible to characterize moods according to all the conditions of definition, if types are viewed out of the confusions of secondary association, as it is to differentiate rainbow-colors out of their blending. The pure indicative is the actual; the pure second mood (subjunctive, optative, conditional, potential, etc.) is the potential; but the actual is itself potential of that which, under the law of universal dualism, it is always becoming, and the potential is actual so far as it is an existent and operating principle; and so we find the two forms secondarily changing places, especially under the tendency to view indirectly (i. e. potentially) what is really an assertion of the actual. This explains the modal use of the indicative, both in the continuative and in the indefinite tenses, involving the transition of tense to mood, so extensively illustrated in Hebrew. And the logical classification of uses not only does not contradict the historical, but it is the only one that stimulates rationally the processes of mind, while the latter may assert nothing beyond mechanical occurrence. This classification does not imply that



"moods were deliberately invented to express certain definite classes of ideas to the exclusion of all others, and then always held rigidly to these predetermined uses; on the contrary, their various uses grew up gradually, as language was developed and found new ideas to express"; but, while the developed series of functions in a mood is not necessarily deduced, each term from one immediately preceding in time, no mood, however its various meanings seem to cross each other's tracks in chronological advance and retreat, ever acquires any use irreconcilable with its origin. Thus the indicative is the generic mood, retaining and sometimes asserting those potential uses of which the other moods are merely specialized functions, more or less capable of reverting to the original value. Finally, as long as our minds work by logical association and not by temporal connections, the correlation of uses will prove more available than their chronological tabulation; and so long as science fails to free herself from the other limits of her jurisdiction, the moods of man may fairly claim to be outside of her power to symbolize mathematically and to define mechanically.

#### VI.

Especially interesting is the substitute for the long since superannuated appendix on the subjunctive and optative; the present view is the one that I have held for some fifteen years; the one that I urged on Professor Goodwin in the revision of his grammar. There is certainly no way to determine that the subjunctive originally expresses only futurity, since futurity and contingency are inseparable reciprocals; but all the infallibility of all the Germans is not sufficient to deduce the uses of subjunctive and optative from such secondary ideas as *will*, *wish*. The neutral value is unquestionably original, and adapts itself to either mental attitude, the cognitive (declarative) or the volitive (imperative). "Potential" is better used as a differential of form than of mental attitude, so that the subjunctive and optative are potential declaratives or potential imperatives; and the infinitive as a predicate may be regarded as an actual or a potential assertion or "imperation." Again, the particle *an*, which has assumed and retained certain conventional positions, is never primary or necessary, but always only a secondary explication of implicit meaning—a view which clears up many difficulties as to its presence or absence in unexpected places. (See §§ 162, 3, 4, 329, 506, 681, 489, 592: cf. *possum* expressed or omitted after vbs. trial—*sz.*)

## VII.

There is the old sophistication as to the change from indicative to optative in *oratio obliqua*. The optative to the indicative is a difference in kind, which is overcome by the conditional (potential) element of *oratio obliqua*; but the optative to subjunctive is only a difference in degree of the same (potential) kind. The optative to the imperative is a difference in kind, being paralleled by an indicative assertion of the actual to an optative with *an* assertion of a potential, which may differ only as direct and indirect views of the same phenomena.

## VIII.

The ordinary aorist now begins to get its dues, but the new learning has not clarified the definition of the gnomic aorist, which the author still ascribes to "animated language," as if the proverb and the oracle were not "sententious" or anything except "animated." And, in explaining, he forgets his definition of aorist and uses the very details he has excluded. The gnomic aorist has nothing to do with "one distinct case or with several distinct cases;" it simply gives the yea or nay of the record, one case being as good as, and no better than, a thousand. "Care killed a cat" has no suggestion of distinct cases; it is only the voice of the record as to the actuality of occurrence. But, when it accepts the fact as sufficiently established by one case, it is far from denying that many have happened; else the iterative aorist with *an* would be impossible.

It is especially important in Greek to antithesize the aorist and the perfect, and I do not think Professor Goodwin has satisfactorily done so. The phenomena referred to by both are the same, necessarily past; the aorist simply so refers to them, the perfect asserts their present value in the form of permanent result or established reputation or abiding experience, without implying substantial or mechanical or concrete result. "I have built a house" does not necessarily imply present possession of the house; nor does "he has killed his man" imply present possession of the cadaver; but each asserts the possession of the reputation established and the experience acquired. But, as the aorist does not express, so it does not deny, the resulting condition; any more than the aorist denies the continuative or repeated character of the act which it, instead of the imperfect, represents; and thus the exigen-

cies of metre, or even mere variety, may veer between aorists and imperfects or aorists and perfects in reversible combinations.

## IX.

The chapter on the uses of the moods, in spite of some shifting, retains its old haphazard arrangement. If there is method in language, there ought to be some method in its presentation. Here Professor Goodwin has not learned from Gildersleeve, or he would never have tumbled simple and complex, direct and indirect, sentences into one chapter, putting asunder sentences that the logic of mind has joined together, and confounding all grades of hypotactic integration. Conditional sentences the extremes of reciprocal subordination, are thrown in midway, with no connection before or after, absolutely cut off from the potential expressions from which they are developed; and the same may be said of relative sentences, except in their relation to the conditional. *Oratio obliqua*, which is not part of any coördinated sentence—classification, is plunged into the midst of unlikes; and *causals* and *wishes* come in as an anti-climax.

## NOTES.

A committee appointed by the Commission of Colleges in New England on Admission Examinations proposed a scheme of uniform elementary and advanced requirements in German and French, and submitted it for criticism to the pedagogic section of the Modern Language Association at the meeting of the Association in Cambridge last December. This scheme is as follows:—

## ELEMENTARY GERMAN.

- (1.) Proficiency in the following topics of elementary grammar: declension of such nouns as are readily classified, of adjectives and pronouns; conjugation of weak, and of the more usual strong verbs; simple cases of word order.
- (2.) The candidate must have read not less than two hundred duodecimo pages of easy German—chiefly narrative prose, with a few lyric poems.



(3.) Ability to pronounce German, and to recognize German words and simple phrases when uttered.

#### ADVANCED GERMAN.

(1.) Proficiency in more advanced grammar. In addition to a thorough knowledge of accidence (including the elements of word-formation), and of the principal values of prepositions and conjunctions, the candidate must be familiar with so much of German syntax as is necessary to an understanding of the use of modal auxiliaries, of the subjunctive and infinitive modes, and of word order in connected discourse.

(2.) Ability to translate ordinary German, to be acquired by the reading, in addition to the elementary requisition, of the following works: *Deutsche Liebe* (Müller); *Höher als die Kirche* (Hillern); *Die Journalisten* (Freitag); *Peter Schlemihl* (Chamisso); *Die Harzreise* (Heine); *Minna von Barnhelm* (Lessing); *Die Jungfrau von Orleans* (Schiller); *Egmont* (Göthe); and thirty pages of lyrics, including Schiller's *Lied von der Glocke*.

(3.) Composition and conversation, presupposing a familiarity with the subject matter and vocabulary of *Höher als die Kirche*, *Die Journalisten* and *Die Jungfrau von Orleans*.

It is proposed that the works assigned be changed from time to time by a committee to be appointed by the professors of modern languages in the colleges represented in the Commission.

#### ELEMENTARY FRENCH.

(1.) Proficiency in elementary grammar, implying a thorough familiarity with the following topics: inflection of nouns and adjectives for gender and number, excepting unusual cases; the "pronominal adjectives;" the use of pronouns, especially the forms and positions of personal pronouns; the partitive constructions; the inflection of the regular, and the more usual irregular verbs,—such as *dire*, *faire* and the classes represented by *ouvrir*, *sentir*, *venir*, *paraître*, *conduire*, *craindre*.

(2.) Ability to translate simple prose at sight, to be acquired by the reading of not less than four hundred duodecimo pages from at least three dissimilar works.

(3.) Ability to pronounce French, and to recognize French words and simple phrases when uttered.

## ADVANCED FRENCH.

(1.) Proficiency in more advanced grammar. In addition to a knowledge of the *accidence*, and of the values of prepositions and conjunctions, the candidate must be familiar with the essentials of French syntax—especially the use of modes and tenses—and with the more frequently recurring idiomatic phrases.

(2.) Ability to translate at sight standard French of the classic and contemporary periods, to be acquired by the reading, in all, of not less than fifteen hundred duodecimo pages, including one play each of Racine and Molière, and certain specified works, which will be taken as a basis for

(3.) Composition and conversation, presupposing a familiarity with their subject matter and vocabulary.

It is suggested that, for the present, the assigned works be the following: *Contes Choisis* (Daudet); *Colomba* (Mérimée); *Horace* (Corneille); *Fables*, livre I. (La Fontaine); subject to future changes in the manner provided for in the foregoing Advanced German requisition.

It should be borne in mind that this scheme is as yet only proposed by a committee and may be modified before being presented to the Commission. It was brought before the Modern Language Association only for incidental discussion, that the committee might learn how their work would be viewed by that body of experienced French and German teachers.

The free expression of opinion that was hoped for was had in full measure. Naturally the members of the Association from outside of New England were somewhat embarrassed to see a proposal of requirements so much in excess of existing ones, and asked such questions as whether this scheme was intended to take the place of requirements in Greek. To such questions however the proposing committee would make no distinct answer, and it had to be settled at last that the proposed requirements were to be considered simply on their own merits, without regard to the subjects which they might possibly displace.

It then became evident very soon that the Modern Language Association did not view the requirements of the scheme with favor. The expressions of disapproval were directed chiefly to the selections for reading. Mr. Lowell spoke for all when he pronounced the selections feeble and of secondary value. Some of them he found too modern for him to recognize.\* It was suggested by one

speaker as a fault that the selections included no historical or scientific passages. A lady, evidently of the most perfect competency to express an opinion, still clinging to the idea that the proposed requirements were meant to supplant Greek, compared the reading matter which they offered in French and German with the standard reading done in preparatory schools in Greek, and seemed to show that by no means an equivalent was presented in the two modern languages for the single ancient one. One speaker objected to Müller's *Deutsche Liebe* as mawkishly sentimental and frowned, for some unexplained reason, on La Fontaine. Evidently the proposing committee did not fail to get points for further revision of their work.

The committee's suggestion of "composition and conversation" elicited queries as to what these terms should be understood to mean. No light however was obtained on this rather vague matter. The members of the committee themselves had not been able to agree upon anything more definite.

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#### BOOKS RECEIVED.\*

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*Luther on Education*, including a Historical Introduction and a translation of the reformer's two most important education treatises. By F. V. N. Painter, A. M., Professor of Modern Languages in Roanoke College, and Author of a "History of Education." Philadelphia: Lutheran Publication Society.

In editing this book, Prof. Painter has given us a genuine addition to pedagogic literature. Not that in it are to be found any truths new to the present generation. But it is both interesting and profitable to observe how the master mind of a memorable epoch formulated and announced principles which, after nearly four centuries of progress, can still be received as accepted maxims. The reformation was not less an educational than a religious movement. Luther himself says: "If I had to give up preaching and my other duties, there is no office I would rather have than that of a school-teacher. For I know that next to the ministry it is the most useful, greatest, and best; and I am not sure which of the two is to be preferred."

The real progress of the four centuries which have passed since Luther's birth rests on no other foundation than the education for

\* Any of these books may be more fully noticed hereafter.



which he pleaded. He was the first to demand compulsory education. In his letter to the Elector John in 1526, he said; "Where there are towns and villages which have the ability, your electoral grace has the power to compel them to maintain schools, pulpits and parishes. If they will not do it from a consideration for salvation, then your electoral grace, as highest guardian of the youth and of all others needing supervision, is to compel them to do so, just as they are compelled to render contributions and services towards bridges, paths and roads, or other matters pertaining to the public interest. Those that enjoy the privileges of a country are to contribute towards everything that the common interests of the country require." "If the government can compel such citizens as are fit for military service to bear spear and rifle, to mount ramparts and perform other martial duties in time of war, how much more has it a right to compel the people to send their children to school."

Luther was also a pioneer in urging the education of women. His idea of a system of education embraced three kinds of schools, the University, the Latin school, on which he laid great stress, and the common school wherein both sexes might be taught reading, writing and music. As might be expected, his reasons for these schools were eminently practical. He saw that intelligence lies at the root of good order and good government, and that it is necessary to the enjoyment of freedom of thought. His ideas of methods of instruction and of subjects for study rested on a practical basis. Religious instruction was with him paramount, and as aids to this he advocated reading and writing. For the development of right character he included history, and as a means of culture and for moral ends he urged music and gymnastics. "Music is a semi-disciplinarian and school-master; it makes men more gentle and tender-hearted, more modest and discreet." It was well considered and arranged by the ancients that the people should practice gymnastics in order that they might not fall into revelling, unchastity, gluttony, intemperance and gaming. Therefore these two exercises and past-times please me best, namely: music and gymnastics, of which the first drives away all care and melancholy from the heart, and the latter produces elasticity of the body and preserves the health."

Prof. Painter, quotes entire, Luther's Letter to the Mayors and Aldermen of the Cities of Germany, in behalf of Christian Schools, and his Sermon on the Duty of Sending Children to School.

*Three Dramas of Euripides.* William Cranston Lawton. Boston and New York : Houghton, Mifflin & Co. 1889.

Mr. Lawton's book is intended not so much for the scholar as for readers, who ignorant of the language, wish nevertheless to know something of Greek literature. Much of the translation and of the commentary contained in this volume has been published already among the well-known classical studies which from time to time have appeared in the *Atlantic Monthly*. In its present form the volume contains the entire translation of the *Alcestis*, *Medea*, and *Hippolytus*. Prefixed to the whole the translator has given in a chapter of twenty pages all that the English reader needs to know concerning the origin and spirit of Attic tragedy, in order to approach the reading from the right point of view. Great skill is shown in this short essay quite as much in excluding what would be for the mere English reader unnecessary detail, as in bringing out into clear and striking prominence the points which most need emphasis.

In character the commentary is well suited to the plan of the book. It is inserted here and there between the lines of the text, but the arrangement of the page is such that the translation can, if it is desired, be read continuously. In the commentary, while never allowing himself to be led aside into irrelevant digression, the author does not hesitate to turn many a side light upon the characters and often pauses to call to the attention of his reader a difference between ancient and modern ideals.

When we come to consider the main part of the work, the translation itself, we find that it possesses two prime requisites of a translation. It is readable and it is faithful to the original. Though here and there the scholar may prefer a different rendering, so far as we have observed, Mr. Lawton will be found to have good authority for the version he has chosen. In the translation of the dialogue the unrhymed iambic verse of ten syllables has been used.

The lyrical parts are well rendered. While Mr. Lawton has wisely refrained from attempting in the long choral odes to reproduce the form of the original, the intricate structure of which the mere English reader certainly would not appreciate, he has in our opinion been very successful in catching the poetic spirit. Some of the odes, particularly in the *Hippolytus*, are so beautiful that they would be worthy of existence apart from the rest of the drama. Occasionally, as in the parodos of the *Alcestis*, the translator has given a version almost line for line in the metre of the Greek. This is oftenest done in the anapaestic verse.

The plan of the work seems as happy as its execution and we trust the book may meet with a reception so cordial as to induce Mr. Lawton to give us others of like character.

# THE ACADEMY:

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## A JOURNAL OF SECONDARY EDUCATION

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DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND  
ACADEMIC DEPARTMENTS

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### PRELIMINARY EXAMINATIONS—THEIR ADVANTAGES AND DISADVANTAGES.\*

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DAVID A. KENNEDY, PH.D., ORANGE, N. J.

Several months ago, at the request of our worthy President, I linked together certain thoughts on this subject by way of an introduction to a broader discussion of it on your part. Our old friend *Jupiter Pluvius*, however, made a *dies nefastus* of the day and no meeting was held.

When, therefore, this second request for a paper came, I bethought me of this earlier subject and felt that its freshness had not entirely vanished, and that still some measure of interest and help might be extracted from the thoughts which my words might awaken in you. If, therefore, I can provoke discussion or comment on the views here advanced, I shall feel satisfied.

This question is one which must be viewed from two positions. On the one side are the preparatory teachers estimating the value of the work previous to the examination. On the other the college officers deciding the value of this work with reference to the later progress. If we consider the faculty the court of higher appeal, it will be worth our while to have their views conjoined with those of the schoolmasters.

\* Read before the New York Schoolmasters' Association, February 8, 1890.



A college catalogue gives information in a general way. It may mean little or it may mean much. We must determine its real meaning by what we know of its practice rather than of its profession. But the information there given is too general for us to arrive at any conclusions concerning the value of such examinations, other than that the well-nigh universal recognition seems to imply such a value.

Taking these statements as a basis, it was deemed wise to supplement them by drawing as much further information as possible from those in authority. Accordingly six of the colleges for men, with which our schools have had threads of affiliation, were selected, and certain questions were submitted to them. Those colleges that receive students on certificate, e. g. Brown and Williams, were passed over because no study of results could be clearly attained on account of the complication with the certificate system. The colleges chosen were Harvard, Amherst, Yale, Columbia School of Arts, Columbia School of Mines, and Princeton. From all of these, except Amherst, answers of some kind have been received, of which the least satisfactory and curtest came from the School of Mines. These are the questions:

*"First:—*When did your college first offer the privilege of dividing the entrance examination?

*"Second:—*How large a portion of each class avail themselves of the privilege?

*"Third:—*Do the examinations of those who make the division show better results than of those who take them all in one year?

*"Fourth:—*Do those who take a subject complete in one year and then wait over another year show any loss on resuming the subject in Freshman year?

*"Fifth:—*Do the authorities require any certificate from teachers with reference to the work done before admitting applicants to the examinations? And do they allow them to try other subjects than those to which a teacher certifies?"

Of course you will readily recognize the fact that the range of the questions might have been made wider. It might have been asked:—What were the subjects most generally offered at that examination? Does the work in the preliminaries show whether the mind at that age grasps better mathematics or classics? And several other questions equally interesting to us as teachers might have been

added. But it seemed to me that an answer might be more easily elicited if too much were not asked.

Moreover, there is a doubt in my own mind whether the colleges have investigated these matters carefully, and have made as thorough a comparison from year to year as would give value to their statements. If we had from the various colleges such comprehensive annual reports as are found in the President's reports of Harvard University, we could readily gain an intelligent grasp of the matter.

And not only in this subject but in the whole line of our work, how helpful would it be to have collegiate reports dealing with the relations of preparation for college to college work, indicating the character of the imperfections and excellences which boys coming from schools show. We could then see, from the careful observation of those who, occupying a different standpoint from ourselves, would be capable of estimating the value of these matters on the progress of the college career, how far our own conception of preparation had been realized.

On collating the several answers that have been received, the privilege is found to have been offered by Harvard in 1874, by Yale in 1882, by Columbia and Princeton in 1884. However, the last two granted the privilege by request before the year stated.

With regard to the second question if I could have received enough data from the other colleges to make the comparison fruitful, I should have been glad to analyze the data contained in the Harvard reports. Under the circumstances it is simply necessary to state that, for Harvard, applicants for the preliminary examination increased from 181 in 1874 to 353 in 1888. In the statement of the number who entered the Freshman class that year, it is mentioned that 351 presented themselves for the finals of whom 226 had passed preliminaries the year before, 50 divided the examination between July and September and 39 took the whole at one time.

At Yale the average seems to approach to two-thirds of those who apply, or, as stated, varying from one-half to two-thirds.

At Princeton between a third and a half of the class apply at the preliminaries. I am inclined to question this statement. I do not feel that it is based on a consultation of the records. From Columbia the report is about three-fifths of the class.

Taking up the answers to the third question, the testimony is well nigh universal that the examinations show better work on account of the division, so far as Harvard, Yale and Princeton are concerned.

At Columbia no improvement is noticed. The Dean at Harvard ascribes this result to the fact that the best trained students, *i. e.* those from the best schools, always divide their examination. Prof. ———, of Yale, after making the statement that the results of these examinations are much more satisfactory, adds "This may be in part because we insist on better work on the preliminary trial, and never accept any subject when the work is doubtful."

And I may say here, that the percentage of rejection in different subjects at Harvard the first year of application seems to show a more rigid system of marking the papers than where all of the subjects are offered at once. It will not do, however, to press this interpretation too far because the immaturity of the applicant and the lack of the discipline of the last year may sufficiently account for this showing.

Prof. ———, of Princeton, finds the work better, particularly in translation, ascribing it to the fact that a boy has not had to carry a quantity in mind for so long a time as one complete examination would compel.

The fourth question was one to which I was extremely doubtful about getting satisfactory answers. I was not convinced that a sufficiently careful observation and noting of results under this system had been made. But at any rate some response indicative of my correspondents' belief in the wisdom of omitting a year's study on any subject at that age, would be brought forth, and might prove valuable. Such proved to be the case. From Harvard comes the statement that the question can not readily be answered and would require considerable investigation, showing, apparently, that this phase of the subject has not been studied, and that their otherwise admirable statistics fail to show a consideration of this question.

Yale has felt an evil lurking therein and expresses herself strongly against any arrangement which would allow any gap in the continuous study of a subject. You may remember that the University reserves both in the Academic Department and in Sheffield certain subjects for the last year. These subjects require a continuation of study in classics, mathematics and modern languages through the last year of preparation.

Princeton, though she allows an examination in complete subjects, prefers the offering of part subjects for these very reasons, unless advanced work of like nature is exacted during the last year. There



is a feeling evidently that the student does better work in college in continuing a subject when fresh from a previous year's work in a like or kindred subject. Prof. ——— instances cases where giving up the work for a year has proved an injury.

At Columbia School of Arts my correspondent feels that "the present system . . . too frequently leads to the neglect and forgetting of portions of the preparatory work before entrance."

Amherst also allows the offering of complete subjects, and I was anxious to obtain their opinion of the practical working of the arrangement, but, as already stated, I failed to elicit a response.

In the matter of certificates from teachers, Harvard and Yale speak with no uncertain sound. They require them.\* Princeton and Amherst do not express themselves clearly in their catalogues on this point, though they seem to indicate it in requiring letters concerning the character of the candidate. Further, Princeton states that "Application for preliminary examination should be made with a statement of the subjects and amount offered at least two weeks previous to examination." On this point, however, there was no statement made in the letter received.

On the other hand, Columbia, both School of Arts and School of Mines, wish it expressly understood that they demand no certificate. In fact the only thing which Prof. ——— felt called upon to answer to my interrogatories was this. "We do not require certificates from teachers with reference to work done, but simply examine the students to see whether they understand the subject, and ask no questions as to how they learn it."

You will see, gentlemen, that before this august tribunal you and I, as teachers, have no recognized standing. With us they wish to have no dealings. We are nonentities in the field of education.

So also in the School of Arts. "The applicant is merely required to set down inside the cover of his examination book the exact amount of work he has done in the subject in which he is to be examined."

Now, since the views of the college authorities have been laid before you, let us look closely at this matter from our position as preparatory teachers. Without doubt, preliminary examinations are viewed as an excellent arrangement. They have eliminated in a

\* We have received reports of cases at Yale where students have been admitted to examination without recommendation from the principal of the fitting school.  
[Editor of THE ACADEMY.]

great measure the chief difficulties which made the final year of preparation severe for student and teacher. Not only was all of the advance work to be accomplished, but care had to be taken that all of the work of former years should receive a freshening before the great struggle. Latin and Greek Grammar, Cæsar or Vergil, Sallust or Ovid, Xenophon and Elementary Greek, Arithmetic, History, Algebra or Geometry, English Grammar, and other subjects which can now be passed one year before entrance had all to be reviewed, if we wished to feel sure of avoiding conditions. The same difficulty is experienced now when a pupil through some deficiency is compelled to reserve all for one examination. Such was the condition of affairs that many students have told me that for two years after entrance they did not find the year's work so trying as the final year of preparation. This trouble has been dispensed with in a great measure by the division of examinations.

But in our relations to some of the colleges this arrangement contains germs of evil which may be fraught with danger to pupil and teacher unless they be eradicated.

In the first place carelessness in the method of conducting the examination breeds evil. One would think that the college authorities would desire to have the examination a fair indication of the knowledge of the applicant, and not of some one else, and would throw safeguards around it to prevent surreptitious help. But, if any of you consult the scholars who have attended these examinations, leading them on to talk freely about the details of the examination, you will find that not only is the temptation to obtain assistance placed in their way but facility of communication fairly invites it. Careless placing of tables and seats, crowding, lack of suitable surveillance, especially where examinations are held away from the college in different cities through lack of suitable quarters, are all fruitful of disadvantages. They affect us mainly who have been able to keep out of our schools, whether by rigid exclusion, or by arousing a higher moral standard, all of those practices degrading to good scholarship to which boys naturally gravitate. This is not the time to consider the morality involved in implicit trust in a scholar with the attendant moral response. The University of Virginia has tried it; and, if reports are to be trusted, has proved such a state of affairs possible. However much we may desire it, the conditions of our society have not as yet proved favorable to such a consummation.

In the present condition of affairs we know that when many boys from different schools are brought together there is more or less of the leaven of dishonesty. Some boys go to these examinations having little knowledge of the evils and guile of the school world. These matters are openly discussed before them, and open-eyed they perceive the various tricks practiced to evade, substitutes for shortcomings in knowledge.

These statements to city teachers may seem absurd or trivial, but I know of one boy at least who was not aware of the existence of a "pony" and of another who had never tried tricks of evasion until a preliminary examination had brought them to his notice. To cope with these difficulties after the finals, rests with the colleges. But after the preliminaries, we are the sufferers in two ways. It introduces a leaven of deceit into the school, and it takes away from some boys a desire for honest work.

Still further, a pupil who has been kept in good trim by the thoroughness of work and examinations in school presents himself at the college examination and finds the papers so easy, comparatively, that he feels that his teacher has over-rated them. His work the following year slackens because the examination has been robbed of its terrors. Moreover he inculcates in others, who are yet to go, the same feeling. Say as much as we may about leaving out all considerations of examinations, and extraneous motives in teaching, and about trying to arouse in a scholar love of learning, pure and untainted, there are times when we are compelled to resort to lower motives. It might be different, if we had our own way in arranging a course for individuals, and were not compelled to follow a prescribed course of studies in which we must treat the scholars like travelers stretched on the bed of Procrustes.

You can, no doubt, recall certain boys who have gone to preliminary examinations and have found the papers so easy to pass that henceforth they have met your earnest appeals with indifference because they thought that the goal, entrance to college, could be reached by a minimum of work along with a good time.

Last year saw me engaged in such a struggle with a boy who had to be fairly dragged along on account of this indifference, bred through the successful passing of his preliminaries.

The admittance to an examination without a certificate from the teacher appears to us not only an injustice but also a blow at the thoroughness of an education. We prepare a boy on a certain num-



ber of subjects, knowing that so far the work is well done. We send him to the examination so far certifying to his preparation. His certificate is not required. Although not prepared in other subjects, perhaps he has studied them for a short time and has some acquaintance with them. Making trial of them he slips through. Others not studied he accepts as conditions, takes a tutor through the summer, crams the subjects, scrapes through them at the fall examination, and is received into college with a mass of undigested knowledge, congratulating himself on his shrewdness in saving a year's preparation, and feeling that, no matter how the school viewed it, the college is satisfied with a smattering of learning. Can such a condition of affairs be indicative of a thorough course of training? Can it be satisfactory to us who have the reputation of our schools at stake when we know that the future failure or shortcomings of such a student is generally ascribed to our lack of instruction?

But waiving that question for a moment let us look at it from the side of the pupil and the college. Can it possibly bring to the pupil a fondness for sound learning? Does it not present to him a premium on cramming and lying? Knowing that no certificate is required, he will, with a half preparation, make an attempt to pass as many subjects as possible, having no fear of consequences, but running the chance of success. True, we see that the School of Arts requires his statement of how much he has read. He can, if truth has no consideration in his make up, state that he has read the whole subject. Or, if with the temptation before him, he still has scruples, he can easily read it over with a translation the previous day and thus save the apparent truth of his statement. Is not this a fostering of the evils which we, as earnest teachers, strive to remove?

But what good can such a method of procedure do the college? Does it wish numbers or scholars? Every time that it admits such ill-prepared students, it degrades the quality of scholarship. The better class of its students deplore such a condition and feel themselves robbed of the advantages which the college ought to offer by the maintenance of a high standard. They talk of the work with ill-concealed contempt for instructors who allow it, and for fellow students who have practiced such a course.

Surely better progress on the road to education can be accomplished if they insist on having students more thoroughly prepared,

and they can be aided in accomplishing this by accepting and requiring the testimony of the preparatory teacher.

How then should we meet these difficulties? We recognize the value of preliminary examinations, and though we evidently can not arrange a plan free from all attendant evils, yet we are anxious to minimize these evils. Let me offer a few suggestions.

To free us from the injury of badly conducted examinations, would it not be best to bring the real state of affairs with its consequent evils to the notice of the faculties of the colleges, state our objections, and petition for a greater exercise of care and caution. Such advice as this a decade ago would have seemed absurd. But a new era is dawning. The unity of school and college is desired in many quarters from above as well as below. Whatever serves to make the gap less in passing from school to college is earnestly sought. And what will more contribute to that result than well conducted examinations? Certainly every thorough teacher welcomes such a test, if honestly passed.

To avoid the gap in continuous study of a subject, an evil which some of the professors recognize and even try to arrange the programme so that it may be avoided, the work can be so planned that the whole of a subject may not be presented at the preliminaries. And this phase of the disadvantages seems to me worthy of close consideration for it affects the scholars most intimately. For us it may be more convenient at times to arrange our plans so that a whole subject may be taken at the preliminary. I cannot but feel, however, if we take the mental development of the pupil into account as we ought, that it is far better to give him continuous work in all subjects up to his entrance into college.

For let us set aside the relations of the colleges to us, and our relation to them, and carefully consider the mental condition in which a pupil ought to be when he takes his preliminary examination. There is no doubt but the last year of preparation marks a wonderful growth in a boy's mind. This fact must receive due weight in discussing this subject. Careful observation for a number of years of many scholars of various degrees of capability has forced upon me the conclusion that the ratio of growth in mind development of a boy preparing steadily for college may be stated as 3, 2, 1. To explain more definitely the estimate of the mental acquirement of a boy, studying year after year from twelve to eighteen years of age, shows that the last year is equal in progress to the previous two years or

the earliest three. There must needs be exceptions, but set aside the exceptionally bright boy, or the exceptionally dull one, and treat mainly of the average boy.

From the age of twelve to fifteen the acquisitive powers are far in excess of the reasoning; from fifteen to seventeen there is a growth of intelligent appreciation; from seventeen to eighteen his mental power is rapidly developed and he begins to see his various studies in a broader relation. If this statement be true, and not a fanciful deduction from the progress of a limited number of scholars, certainly the studies which we place before pupils at these different periods should be such as are suited to the different stages of development. The colleges indicate for our guidance certain lines and numbers of studies, an arrangement we find of mixed good and ill. It is necessary for us to keep these clearly before us as subjects that must be prepared, although we may, if time allow, supplement them with any other study. With this material to work on, that part of it which can be definitely stored in mind belongs in a great measure to the first period. Then the memory is at its freshest, and all means should be employed to strengthen it and render its grasp firm. Mathematical tables, language forms, simple facts should be prominent until they are well fixed in mind. It is not meant by this that all matters of interest should be eliminated, merely that the use of the memory should be kept prominent. For at this stage even the brightest pupils gain their highest pleasure in well committed lessons.

In the second period the mind, still holding fast to form, begins to widen in comprehension, and takes a more intelligent interest in the structure of language, in historical application of thought, and in logical and reasoning power. Lessons begin to be something more than assigned portions of a book. Intelligence and understanding show their existence, and the teacher receives a more responsive attention when he indicates the kinship of the present with the past. In fact the intellect begins to divine the use to which it may be put.

Towards the close of this period comes the time when the preliminary examinations are to be taken. Now comes the inquiry, for what are they ready? Is it wise to place before them questions of the same character as at the final examinations? I can not think so. The mental growth of that last year of preparation is so enlarging that we are apt to overlook the callow state of the mind at this period. No such demand can be made upon them, with any possibility of success as in a twelve month more.



With these views in mind let us see where the studies with the resulting examinations most advantageously place themselves.

In mathematics there should be the leading portions of Arithmetic which have been studied in earlier years, of course, and are now reviewed and rendered easier through some knowledge of Algebra. Add to this for the preliminary the Algebra, except those problems which require keen logical procedure to solve, and which to my mind have no valid excuse for being in an entrance examination at all. Surely they have no place at this preliminary examination. The Geometry, especially where problems are introduced and the study is made something more than a work of memorizing, should be given in that period when the boys mind is best developed, *i. e.* the final examination.

For simplicity and interest the History of the United States and of Greece should come in the earlier year. Roman History, especially if treated constitutionally, is best reserved for the last year. The English Grammar and Composition show best results at the end. Practice in them is needed through all the time of preparation; but the broadening of the mind gives form and thought a better opportunity to combine, and treats the subject in composition more intelligently when the pupil is ready to enter college.

The elements of French or German, studied as they are more for the practical use of language than philologically, grammatically, historically, are subjects suitable for the preliminary examination. It follows naturally that advanced study in these languages belongs to the final year.

In Latin I should limit the preliminary to prose Latin. By the end of that year the knowledge of forms should be thorough, the acquaintance with the syntax of the noun should be good, the structure of the sentence should be mastered, and the use of the subjunctive should be fairly well understood. All of this can be obtained through the study of the elementary books, Cæsar, Cicero and Sallust. This leaves for the closing year Vergil and Ovid, with prosody, derivatives and mythology.

I used to think that the grasp of the subjunctive made it necessary to retain Cicero for the last year. And, therefore, Vergil was read by my classes immediately after Cæsar. I argued and seemed for many years to find satisfactory proof that the interest in story and mythology made Vergil, though naturally harder, easier for students and that juggling with moods prevented the clear conception of

Cicero's meaning. Two or three years ago I made the change, and have been well satisfied with the results. On beginning Cicero in September short lessons in syntax treating of the moods are daily assigned, and the principles applied, while by the Christmas holidays the advice can be given and followed:—"Whenever you meet a subjunctive tap him on the shoulder and ask him why he is there." This digression will show why Cicero is placed in the preliminary work. Latin Composition, of course, accompanies the continuous study of Latin, but if, as a separate part, it is studied the last year, it acts as a foil for poetry, keeping the mind well acquainted with grammatical principles.

In the study of Greek it is difficult to have four books of the *Anabasis* ready for the preliminary examination. And, moreover, it does not divide the work well with Homer. For Homer does not require the whole of the last year. So grammatical forms, the syntax of noun and verb, and two, or at most, three books of the *Anabasis*, would be the best arrangement. That would leave Books III. and IV. or IV., or better some of the *Memorabilia*, *Hellenica*, or *Cyropedia*, and Homer along with derivation and prosody for the last year. I would say the same for Greek composition that I did for Latin. Let it accompany the yearly work, but reserve the examination for the final, keeping it as a study which will retain the knowledge of Attic Greek, and at the same time will be a foil for poetry.

Where Physics is required, as at Harvard, the character of the work demands that the mind should have its broadest grasp, and this will relegate the subject to the last year.

To sum up then, in the earlier year I would present prose Latin a part of prose Greek, Arithmetic, Algebra, Greek History, American or English History, Elementary French and German; and reserve English composition, Latin poetry, Greek poetry, advanced French and German, Latin Composition, Greek Composition, Geometry, Roman History and Physics. This arrangement seems to me most advantageous to the student.

To meet the case of a scholar who becomes heedless and careless after finding the examination easy, what help or solace can be offered. The evil strikes deep and any remedy seems inadequate. The plan of studies offered, some stimulus in the way of prizes, the introduction of an additional study in which an interest may be aroused through its freshness, a steady appeal to higher motives, are

possible helps. But the evil lies in the character of the examination. *They* must be changed. Generally they are not of a character to furnish a true test of the student's knowledge. Before we can eradicate this evil we must have examination papers which, though not necessarily severe, yet enable a scholar to display the extent of his knowledge whether great or small. This however opens a field for discussion too wide for the present time. I hope that some one will make a careful study of the matter and come forward with wise suggestions which we may advocate.

Finally as to the evil of admission to examination without certificate, if we can not by presentation of this subject influence the college authorities to see that they are doing great injury to the cause of education in allowing this slipshod preparation to pass muster, we have a measure of relief, if not a remedy, the radical one of refusing to prepare a boy for that college except for the final examination. This may be a severe trial to ourselves, but our reputation is at stake. We are trying to elevate the standard of scholarship. We can not afford to have these half-prepared scholars presented to the college-world as the outcome of our work. And, though by following this plan we bring upon ourselves more work for the present, is it not better for the sake of the future to join as an association in a protest, and to take a firm and united stand against this practice?

Let us agitate, agitate, agitate until we force a respectful consideration of our reasonable demands. The relations of the colleges and the schools are steadily growing closer, and the changes which the New England Association has wrought is an earnest of what firm, concerted action on our part can accomplish.



## *DOMESTIC ECONOMY FOR HIGH SCHOOLS.*

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It is not the purpose of this paper to discuss the psychological value of Manual Training. That side of the question has engaged the thought of educators and filled the columns of our educational journals until the people are beginning to look for practical results to solve the problem of its success or failure in connection with public schools. The drift of discussion has been directed mostly by those whose opinions have placed them at extreme positions. On the one hand, Manual Training has been most strongly advocated by those whose experience is limited principally to private schools; while on the other, it is as strenuously opposed by teachers whose personal tastes and experience has led them along the lines of purely intellectual work; and who, therefore, look with alarm upon any invasion of the long established course of study with which they are familiar.

The private school sustains a different relation to the people from that of the public school. It may choose for itself the demand it will meet; while the public school is confronted by a variety of interests, each pressing its claim for recognition. Again, however deeply we may feel the importance of purely intellectual culture, we can not fail to appreciate the fact that the present state of society is such as not to be content with limiting popular education to the field it has so long held. The direction in which this field shall be extended must undoubtedly be determined by experiment and not by theory. The Manual Training experiment in the Philadelphia schools undoubtedly furnishes a broader field for investigation than is to be found where it is limited to the upper grades. Those who are intimately concerned in secondary education, however, have some interest in the subject in its relation to their special work, and to them a statement of the facts that have fallen under our observation is submitted.

The Scott Manual Training School of Toledo is conducted as a department of the High School. The building erected for this purpose forms a wing to the High School building, so that the transfer of

classes is effected without inconvenience. In discipline, classification, and general management it is as thoroughly a department of the High School as are the studies of mathematics and science. This school affords a course of laboratory instruction and drawing for boys and another for girls. A brief explanation of the latter is the aim of this paper. When the school was established in 1884, provision was made for the boys' department only. The enrollment of boys increased with the organization of each new class. In June, 1887, the school graduated a class of boys fifty per-cent larger than that of any preceding year. That some of this number remained till graduation because of the advantages afforded by the Manual Training School, is in accord with their own testimony and that of their parents. The popularity of Manual Training among the male pupils inspired confidence in the undertaking of a similar course for girls. The following year some of the girls entered classes in drawing, light wood-work, and wood-carving. But it was not till '86 that a complete course in domestic economy was adopted which should extend over the same period of time as the course of laboratory instruction already established for boys. The classes of '89 and '90 enrolled more than double the number of girls graduated in any one class prior to '88. In fact the entire number of graduates of each year, both male and female, is now double what it was before the advent of manual training, although the enrollment of the school has increased only about sixty per-cent.

The training in domestic economy is taken in connection with the last four years of school-work. Throughout the entire course, drawing (both free-hand and mechanical) is made a daily exercise occupying a regular recitation period of forty-five minutes.

The laboratory work for the first year is a course in wood-carving—time, forty-five minutes per day. The instruction includes the use and care of light tools, working out designs in wood for household decorations, frames, easels, easy inlaid work, &c. The pupil applies her knowledge of free-hand drawing in such a way as to correct many errors of the pencil. Habits of exactness are also developed. The instruction also aims to create an appreciation for the beauties of natural woods, and to show how art may profit by them. A discrimination between cheap, bungling work and that of skilled workmen in furniture and other household decorations is a natural result. Wood-carving has proved to be a most fascinating, and, we believe, profitable study for the young ladies of this school.

This course is followed by one in plain sewing. The time given to laboratory work is the same as that for the first year. A series of exercises which covers everything in this line up to drafting and fitting constitutes the work of the year. Following this is a course in cooking. For this and the fourth year the laboratory hour covers two recitation periods of forty-five minutes each. The study of cooking is pursued in a thoroughly scientific manner. In the main the analytic method is followed, scientific principles forming the basis for each subject of study. One lesson is given each week on the chemistry of food. Chemical changes in the preparation and also in the digestion of food, impurities and adulterations in cooking materials, &c., from the subjects for these lessons. The condensed outline given below will convey a more exact idea of the plan for the study of cooking and also that for dressmaking.

Experience has shown the propriety of placing the study of cooking between that of plain sewing and dressmaking. At any rate it is the plan best adapted to the course of study in this high school. By this arrangement the study of physiology is completed, and the pupils are ready to take up elementary chemistry—especially the chemistry of food—when they begin their course in cooking. The instruction in plain sewing is also placed within the reach of those who cannot remain at school for the entire course; and the greater number of such pupils have more need for this instruction than for cooking. The results attained by the department of domestic economy have thus far been highly satisfactory. The ability of these pupils to do practical and economical cooking and sewing, as well as their success in free-hand and mechanical drawing, is fully up to the expectations of those whose public spirit brought the school into existence. The Manual Training School has been the means of arousing a sympathy for the High School in many homes where the value of intellectual culture is not readily appreciated. Through the department of domestic economy in particular is the influence of the school carried into the home. This statement would be of little worth, if manual training constituted a course in itself, unaided by other studies, but when it is remembered that no part of a regular high school course is omitted to make room for it, that all manual training is but a systematic recreation from close study, it will be understood that whatever good it may accomplish is only a concomitant of what is accomplished by intellectual work. The readers of *THE ACADEMY* are familiar with the objections urged against the



public high school. These objections usually come from people who estimate all things by their commercial value and wholly ignore the value of intelligence and character to both the individual and the state. It is fair to say that not the least among the benefits of manual training is the good it has accomplished in exerting an educative influence over this class of people, making friends out of many who would otherwise be enemies to anything like higher education at public expense. No doubt teachers in the schools of the East will fail to realize the full meaning of this statement as do those farther West, where the dollar is the most important factor in all enterprises both public and private. We have no patience with the cry for more "practical" schools, so long as we know the word, "practical," to be made but a synonym for dollars and cents. Whatever helps to bring out the *man* and the *woman* and teaches them how to use their faculties is in the highest sense *practical*. The study of domestic economy along with that of books can not fail to teach young women the use of talents that would otherwise remain undeveloped, and to dignify the duties of the home. It is the actual testimony of young ladies now in the training classes that they take pleasure in doing house-work that had always before seemed like a burden. We are often asked what class of pupils avail themselves of the opportunities afforded by this school. The question can best be answered by referring to the class usually found in high schools, with the exception of a slightly larger percentage of those who come from families in narrow circumstances. There are representatives of wealthy families, others who only by the most rigid economy manage to remain at school; but the majority are from the middle classes—those who furnish the bone and sinew of the social and industrial world. The enrollment of the domestic economy classes for the month of January, 1890, numbered 161, 41 of whom were from families of wage workers, whose only means of support is manual labor.

The effect on scholarship seems still to be a question in the minds of many, although it has been repeatedly answered by the leading Manual Training schools of the country. Time expended in shop work would undoubtedly be felt by the pupil whose out-of-school hours are nearly all consumed in manual labor. But the majority of city boys and girls have so few duties outside of school that ample time remains for study; and unless some of it is so expended, their

intellectual faculties seek recreation along other lines. When this recreation is afforded by regular and systematic exercises that are productive of material results, the pupil experiences a satisfaction which acts as a stimulus to beneficial action. It is the general rule that pupils whose work in manual training is of the best order are among the best in high school work. There are exceptions to this rule depending largely on the talents of the pupil. Graduating honors have been taken by pupils who have carried the manual training along with the high school work. In some cases scholarship has suffered, but in every one of this character it was found that the pupil was attempting too much outside of school hours in matters not pertaining to school. The studies of geometry and physics are often materially aided by the instruction in mechanical drawing and laboratory work. In fact the matter of scholarship is no longer a question with us. No distinction between those who take the training and those who do not can be made on the basis of scholarship. If the choice of pupils and the testimony of parents are of any weight in answering the question, "What shall the public schools teach?" the experience of Toledo would dictate a thorough course in domestic economy for every girl who would be a true ornament to the home.

Following is a condensed outline of the course in cooking and dressmaking:

#### COURSE IN COOKING.

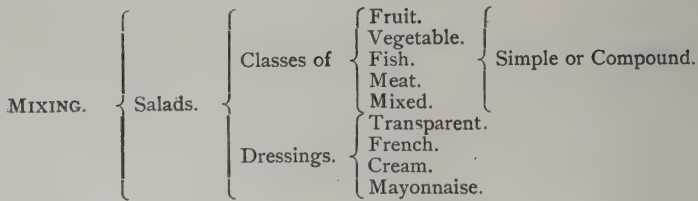
##### I. Definition of.

Methods of	{ Boiling.
Importance of	{ Baking.
Divisions of	{ Broiling.
	{ Frying.
	{ Mixing.

BOILING.	{	Definition of.	
		Water.	{ Scalding.
			{ Simmering.
		{ Boiling—its action on starch and albumen.	
	{	Vegetables.	{ Potatoes.
			{ Corn.
		Meats.	{ Macaroni, etc. { Clear Soup.
			{ For soups. { Tomato soup.
			{ For stews. { Oyster soup, etc
		Liquids.	{ To be served whole.
			{ Custards and sauces.
	{	Eggs—hard and soft.	{ Tea, coffee.
			{ Chocolate.

BAKING.	Definition of	Fermentation.	{	Lactic.			
					Vinous.		
						Acetic.	
	Bread raised by yeast.	Yeast.	{	Definition of.			
					Kinds of		{
						Compressed.	
	Liquid.						
		Flour.	{	How prepared.			
					Tests of good.		
	Baking Powder.					{	Cream of Tartar.
		Phosphate.					
			Alum.				
	Bread raised by Baking Powder.			Cream of Tartar.	{	How obtained.	
Adulterations.							
		Soda.	{				How obtained.
	How used.						
Cream of Tartar.							
		Sour milk.					
	Molasses.						
Meats.			{	Beef.			
		Veal.					
	Chickens, etc.						
Made dishes.			{	Meat Pie.			
		Meat ve chauff��.					
	Creamed chicken.						
Hash, etc.							
		Pies.	{	Fruit.			
	Meat.						
Custard.							
		Puddings.	{	Baked.			
	Boiled.						
Steamed.							
		Cake.	{	Loaf.			
	Small.						
Vegetables.					{	Potatoes.	
		Tomatoes.					
	Fish.						
BROILING.			Definition of.	Steaks.	{	Beef.	
		Veal.					
	Pork.						
			Chops.	{	Lamb.		
		Mutton.					
	Fish.						
			Oysters.				
		Definition of.					
	Fats used.			{	Suet.		
			Drippings.				
		Lard.					
	Cotton seed oil.						
			Olive oil.				
Fritters.		{		Batter.			
	Fruit.						
			Vegetable.				
Oyster.							
	Doughnuts.						
		Croppers.					
Muffins.							
	Veal.						
		Chicken.					
Lobster.							
	Potato.						
		Rice.					
Croquettes.			{	Veal.			
	Chicken.						
		Lobster.					
Potato.							
	Rice.						
		Fish.					





## COURSE IN SEWING—TWO YEARS.

*First year, 45 minutes each day.*

Plain sewing { Hand sewing.  
Machine sewing.

Position for sitting.

How to use the hands.

How to use the scissors.

Practice work :

1. Basting stitch.
2. Running stitch.
3. Back stitch.
4. Imitation machine stitch.
5. Turning, basting and hemming a hem.
6. Overseaming.
7. Fell.
8. Bias fell.
9. Reversible seam.
10. Overcasting.
11. Sewing on strings.
12. Square patch.
13. Round patch.
14. Gathering and putting in a band.
15. Button holes.
16. Sewing on buttons.
17. Darning.

Machine sewing :

1. The understanding of the parts of the machine.
2. Care of the machine.
3. Plain stitching.
4. Hemming.
5. Gathering.
6. Tucking.

Drafting of patterns for underwear from actual measurements.

The making of these garments by the application of the hand and machine sewing learned.

Lessons on the material used in white sewing.

Pins, needles, thread, cotton, linen, manufacturing.

Lessons on shopping.

Choice of material.

Practical experience in buying goods for a garment by each pupil.

Neatness and accuracy in work required.

*Second year, one and one-half hours each day.*

Dress making :

1. Taking measure.
2. Drafting, { Basque.  
Sleeves.  
Skirt, etc.
3. Transferring pattern to lining and cutting out of the same.
4. Basting lining on goods.
5. Basting basque together.
6. Fitting.
7. Stitching.
8. Pick out bastings.
9. Fitting.
10. Press seams.
11. Finish seams, { Overcasting.  
Binding.  
Blind stitching, etc.
12. Whale bones.
13. Facing.
14. Buttons and button holes.
15. Collar and finishing.

Sleeve—Measure, draft, cut, baste, fit, stitch, pick'out basting, fit, press seams, face.

Skirt—Measure, draft, cut, baste, stitch, face, hand and drape.

Textile fabrics obtained from plants and animals :

Plants,	{ Cotton. Flax. Hemp. Jute, etc.	Animals,	{ Sheep. Goat. Camel. Chinchilla. Silk worm, etc.
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Materials made from each.

Theory and art of dress as regards form and color.

Lesson on shopping.

Practical experience in the buying of a dress by each pupil.

Practice in designing dresses.

Sketching designs for dresses.

Equipment of sewing room :

Large mirror.

Screen.

Sewing machines.

Pressing boards and irons.

Gas stove.

Desks.

Drafting paper.

Equipment for each girl :

A drawer 40" x 20".

Scissors.

Tape measure.

Tracer—crayon.

Needles, pins, thread, etc.

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### *NOTES ON THE HISTORY OF ARITHMETIC—ITS SYMBOLS.*

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The first visible signs of number were probably the fingers of the hand. The fingers furnished a ready passing signal for the indication of small numbers to the eye; but they offered no means for the equally important step of making a permanent note of them. To do this some tally or sign was needed. The Romans marked the years by the annual nail driven into the temple of Minerva. The Babylonians expressed all numbers by the repetition of a single pair of symbols. The Egyptians used hieroglyphics; *e. g.*, a frog stood for 100,000. The Greeks, the Hebrews and the Romans used letters of the alphabet. The advantage in the use of the above-named methods for the expression of number was mainly in their brevity; they furnished no assistance to calculation.

There is another system of notation, the Arabic, so far superior to the rest, as to have superseded them all. Equally short with the others, it suggests by its very form those striking analogies which are so valuable as aids to computation. It contains two features that distinguish it, and on which its superiority depends—place-value and the use of the zero.

Omitting the symbols of obsolete systems, it will be the aim of the present article to inquire into the origin of the symbols employed in the modern arithmetic. These symbols may be divided into three



groups: symbols of number, symbols of operation, and symbols of relation. Only the first is here presented.

#### SYMBOLS OF NUMBER.

The Arabic notation traces back its lineage to India. The designation Arabic, as a descriptive term, is a misnomer. The Arabs never claimed the honor of the invention. Europeans received their knowledge of these numerals from the Arabs and too hastily concluded that the latter people must have been the inventors. The Arabs themselves, however, acknowledged that they were indebted for them to India. In this verdict investigators concur with entire unanimity. An old system of numerals is known to have been in use in India in the early part of the third century, B. C. The origin of these numerals is obscure but their forms are preserved on inscriptions of that date. The forms of the later Indian numerals, to which the modern system directly traces its source, are clearly derived from the earlier system. The earliest known example of a date written in the modern system, with place-value, and the zero, belongs to A. D. 738. There is, however, some evidence tending to prove that it was in use, along side the old system, two centuries before that time. There is no proof as yet that the completed modern system was used before the sixth century, A. D.

Thus much then in the genealogy of the nine digits is undisputed: They come to us from India and trace their forms directly to the later, and ultimately to the earlier Indian system. To what then do these characters owe their present *form*? Were they arbitrary signs called into existence for this very purpose or were they borrowed from some other art or science where they had previously served a different purpose, and *adapted* to their present use? To this question various answers have been given. Some have seen in them the pictures of the different combinations of the fingers of the two hands in the act of symbolizing the successive numbers which the digits represent. To justify this theory they point to the symbol for *one* which in all systems not purely alphabetic seems a clear imitation of the single outstretched finger. And, indeed, six or eight, or any other number of fingers selected from the two hands may be so arranged as to throw a shadow not wholly unlike these digits respectively. Another theory was held by Gatterer. He imagined that he had found an alphabet in Egyptian manuscripts, nine of whose letters were the nine digits now in use. Another theory

supposes that the forms of the nine digits were built up, as it were, out of angles which afterwards lost their corners and became cursive by use. This theory was suggested by the proficiency of the early mathematicians in geometry which deals largely with angles. And since the science of geometry is older than that of arithmetic, it is not impossible that angles should have been employed for the representation of numbers. A fourth theory seeks to construct the respective digits out of as many horizontal and perpendicular strokes as there are units in these digits. This was undoubtedly suggested by the convenient and universal use of the straight line for keeping tally.

All the above theories, however, seem far-fetched and improbable. For their proof they draw very freely upon the imagination. They depend upon a quasi theory of evolution whose links are largely missing. They are here reproduced because they were the opinions of the scholars of the last century, and are still sometimes met with—not because it is believed by the present writer that any one of them is the true theory.

The latest theory for the origin of our symbols of number and the correct one, it may be, is that *they were originally the initial letters of the Sanskrit numerals*. This theory is confidently declared as proven by the great authority of James Prinsep and Max Müller, both of them profound Sanskrit scholars. These are Max Müller's words: "It is now proved that the Indian figures were originally initial letters of numbers in Sanskrit." Such use was possible because the initials of all the numerals were different letters. Such use was also likely, as it agrees with the common alphabetic systems in employing letters.

Still more difficult is it to give a satisfactory account of the zero, which stands first in importance although it was the last to appear among the symbols of the Arabic notation. According to the line-theory it was suggested by the completion of the circuit of the fingers. The advocates of the angle-theory say it was adopted because it contains no angles. Other conjectures, just as vague and unsatisfactory, have been proposed; but there can not at present be said to be even an approach to a general unanimity of opinion. Says Max Müller in his "Chips from a German Workshop," "It would be highly important to find out at what time the naught occurs for the first time in Indian inscriptions. That inscription would deserve to be preserved among the most valuable monuments o

antiquity, for from it would date in reality the beginning of true mathematical science, impossible without the naught—nay, the beginning of all the exact sciences to which we owe the discoveries of telescopes, steam engines, and electric telegraphs.”

The origin and age of the symbols of the Indian numerals has thus been seen to be still under dispute. At first the symbols appear to have been used without place-value and the zero. Like the Indian alphabet they were probably derived from abroad—possibly, as is believed on philological grounds, from Thibet. The Hindoos consider this method of numeration as of Divine origin, “the invention of nine figures with device of place being ascribed to the beneficent Creator of the universe.”

Unfortunately, the symbols have changed in form beyond identification. They are not now written as they were in the year 1,000 A. D. Most of the theories given above are little more than guesses, and no guess or discovery of a chance relation or similarity is of the slightest value. The question has been the subject of long and laborious investigations, which have again given rise to several variations of the “Initial theory.” The study of the inscriptions and manuscripts by the searching methods of comparative philology leaves us the hope—perhaps not altogether idle—that one day we shall yet be able, with some degree of positiveness and completeness to answer the question, Whence come the Indian numerals?

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### *THE MORAL ASPECTS OF TEACHING.*

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Ours is the age of critical unbelief. If, in the next century, our history should be deemed worthy of attention, perhaps its leading characteristic will be its iconoclastic rage against all things ancient and venerable. Let it be understood in the outset that this paper has been written in support of no creed; to define no system of ethics; but to point out, in some imperfect manner, a few of the serious problems attendant upon the “Moral Aspects of Teaching.”

It seems unnecessary to resort to argument to establish the im-



portance of the moral interests of society, or to prove that upon the strictly moral element depends the stability of our government. I feel sure most thinking men will agree with me that the moral interests of a school, community, or state are paramount to every other earthly consideration; that without moral training the pupils of to-day are developing into capable knaves for to-morrow; that unless the teacher recognize the grave responsibility resting upon him in this matter, he not only neglects one of the most important functions of his office, but by that neglect, he may entail untold suffering and misery upon the generations that are yet to come.

In the minds of many right thinking people there is a serious lack of attention to this much needed branch of our educational work. That the schools are doing something in this line, need not to be said, yet that there are just causes for apprehension and anxiety, not even the most sanguine enthusiast will deny. If ever, in the history of our country, there has been a need for moral training in every walk in life, and in all classes of society, we have lived to see that need. Against the false and rotten standards of the time, must be reared the monuments of blameless lives. Liberty is mistaken for license; the anarchist cries down with all form of government; the brewers of Cincinnati declare "We recognize no law that does not accord with our ideas of right." The mob in Buffalo hisses the American flag. "Young America" is sadly wanting in respect, obedience and practical morality. The tendency of the age seems strongly Anarchistic. It is fitting that some counsel should be taken regarding the moral outlook for the future. If New England was sown with the choice seed of three kingdoms, to found an enduring nation, if the puritanic seed of that region has civilized, freed, humanized and educated America, what are we to hope for as the fruitage of seeds now ripening on every hand? What with murders and robberies, elopements and defalcations, occupying the pages of the daily papers, with Government, business, politics, justice, even education in the hands of men whose avowed principle of action is that money is God and "Every man has his price," is it yet time for those who still have faith in honesty, integrity, manhood and womanhood, to arise and express the hope that such things are not yet out of date? It is said that our schools are godless. That no thought or suggestion of moral training proceeds from the system of public education of to-day.



Now it may be well to remark that the schools will compare favorably with any branch of public service that the world has ever seen. It might also be said with some degree of truth, that if the schools are godless, the legislatures, courts of justice and methods of daily business are infinitely worse. Still it does not advance matters greatly to take comfort in the thought that we are no worse than our neighbors. The questions at issue are, do the schools recognize any need of moral training, as such, in the school itself? Secondly, what are the general outlines of such training if attempted, and finally, what are the means by which the desired ends may be attained.

As to the first question it is well agreed that the schools contemplate moral instruction in their field of usefulness. But the precise meaning of morals and moral character seems extremely vague. The requirement of "good moral character" is the same in the language of the law, whether the applicant is to be licensed to teach morals in the public schools, or to deal out damnation in the public drinking hall. That some work in moral instruction in our school has been done is a foregone conclusion if the schools themselves have in any reasonable degree deserved the name. A far greater work remains to be done in securing more definite ideas of the limits of responsibility of the school and the home in moral matters, and in the more effective teaching of the most fundamental principles of moral character.

First among the cardinal virtues, of which our rising generation stands in need, I would teach obedience. No boy or girl is fit for the duties of active life, who has not been taught to obey; to obey willingly and promptly. It is the foundation stone of all law, order and civilized society. Insubordination strikes at the root of all government and without obedience chaos were come again. It is necessary for the young will to be made subject to that of another, before it becomes in any way fitted to govern itself. In too many families the ancient motto of "Children obey your parents" has been revised to suit a new and perverted order of domestic life. The most pitiful confessions I have ever been forced to hear were those of parents who have come to me to say, "I wish you to do the best you can for that boy; we can't do anything with him at home." Now it is of vital importance that that young man be taught to obey some one, and that right early; otherwise there will be trouble in the near future. The boys in the Reform Schools, Houses of Correction, and

the inmates of Penitentiaries are largely those who were lawless at home. The ability to live according to certain fixed and reasonable requirements presupposes a moral training in which many of our homes of to-day are lamentably deficient. How much more important is it then that the schools should exemplify this much needed virtue in its most perfect form? It may cost effort, it may cost the expenditure of physical force, but without it no school can exist and deserve the name. Obedience should be inserted in the curriculum of every school in our state. It should be taught in every grade from the Kindergarten to the University and should be a "required study" in every grade.

I conceive it to be the aim of all true moral training, to render the individual responsible; to beget a sense of the true relation of man to his fellows and to his environment; to teach, early in life, the fact that "Life is no joke;" that it is full of terrible realities that will not be waved into insignificance; that the man who lightly tosses the responsibility of life upon his finger tips is toying with his own destruction; that the question of life and duty is not one of happiness at all; that each individual must represent a living fact of whose earnestness he needs to be assured. The primary struggle in this moral conquest lies with the natural desires. The pupil must be made to understand that self-restraint is a vital necessity; that here, as everywhere, "The wages of sin is death." It is of fundamental importance that this principle of self control and self denial be well impressed; for the boy to understand that his love for play, for company and for sleep must yield that he may receive the better gifts prepared. He must be made to feel that it is a matter of personal effort on his part, and opportunity for freedom of choice must, of course, be given, else no real growth in moral courage or conviction, is possible. The "cloistered" virtue remains but a latent possibility until called into active service. It is the personal element largely, that can be rendered most efficient here, and the student learns again with Faust:

"Entbehren sollst du, sollst entbehren  
Das ist der ewige Gesang,  
Der jedem an die Ohren klingt,  
Den unser ganzes Leben lang  
Uns heiser jede Stunde singt."

Thou shalt abstain-renounce-refrain !  
Such is the everlasting song  
That in the ears of all men rings,  
That unrelieved, our whole life long,  
Each hour, in passing hoarsely sings.

The practical test of this part of the system is, can the boy be trusted? Does he recognize and accept responsibility? Has he acquired manliness and self-respect?

Again, I believe it to be essential to the interest of every boy, that he be taught to work. One of the curses imposed upon too many children of large cities, is idleness, either enforced or voluntary. This of itself breeds a line of evils which no man can number. I believe in the divinity of labor; that every person of sane mind and sound body owes to the world the price of his existence, and that success, safety and happiness can be secured in no other way. Men have not yet gathered grapes from thorns, nor figs from thistles, yet either is easier than to secure proper moral growth from pupils habitually and constitutionally idle. So long as the boy will do something, there is some degree of hope, but deep seated indolence locks the door and throws the key into the well. Now the habit of industry is capable of almost infinite cultivation and development. From the boy who is too lazy to catch flies, to the one who ruins his eyes by insufficient light, the ascent is long and worked by endless gradations, and the patient teacher finds large fields for the exercise of toleration in every class. Often the boy who seems to do least, but who honestly tries, is the one most deserving of encouragement.

The tonic effect of activity, either mental or physical, is essentially a moral influence, and frequently a boy may be set to work best by first affording him an opportunity for vigorous play. The one seems to render the other possible and acceptable. Moreover, the pupil who has the habit of industry firmly established is fortified against temptations toward trifling and frivolous occupations; his habit of doing, calls for something to do; he feels a sense of impatience at frittering away his time and begins to feel and know that

“ Time wasted is existence,—used, is life,”

Nothing is more conducive to the growth of this moral quality than the assignment of fixed lessons, the requirement of a definite amount of work in a definite amount of time, and the certainty that

it will be exacted at the expiration of that time. It is the certainty of the day of reckoning that lends tone to its moral influence. The day of Judgment loses wonderfully as a moral force from the difficulty of fixing the exact date.

Another aim of school training should be to cultivate the virtue of intellectual honesty. How rare this beautiful flower of mental culture is, only the experienced teacher can tell. In the broad garden of the public school, amid the luxuriant growth of "per-cents" and "examinations," "promotions" and "standings," it is frequently trampled quite out of existence, or at best found so stunted and weak that it is unable to stand alone. How many recitations reveal the true state of the pupil's knowledge of the subject? How often is the correct reply only a happy guess, a choice between two unknown quantities, suggested, perhaps, by the teacher's intonation or incipient smile? Now true education, in its last analysis, seems to me to be nothing less than honesty itself; it is the fruition of man's desire to know—and to know the truth, at whatever hazard. It is this that commands respect for such men as Darwin and Huxley; men who have said in their hearts, "We will know the truth and tell it as we find it." Galileo, Kepler, and Newton did the same. Were their revelations any less blasphemous in their day? Now the desire to know is natural to every healthy child; the desire to seem to know is an acquisition of later life; fostered in too many cases, I fear, by methods intended to produce a far different result. The student who leaves the class-room having made a brilliant recitation by chance, carries with him a sense of disgust, a feeling of the hollowness of appearances made all the keener when subsequent recitations reveal, as they certainly will, the gauzy frame-work of pretended knowledge. Now it is not expected that such things will not occur in the best classes, but the aim should be to create a noble dissatisfaction with anything short of thorough knowledge. A sense of our ignorance is the first step to knowledge, and the pupil who is too proud to say he does not know, is not yet honest enough to begin to learn. The various forms of this pretense to knowledge often prove very trying things to meet in the class room, and in some cases I feel quite sure the mode of instruction and the general atmosphere of the class-room tend to encourage rather than to suppress the evil.

A necessary element in the moral growth of any pupil is an attitude of respect; a proper regard for the rights and privileges of



others; of their feelings, property and opinions; a respect for authority in whomsoever vested; for old age, for women, and for all things pertaining to the house of God or his worship. That the moral training of the school should reach out in this direction, no one will question for an instant; that there is a crying need for such culture among the rising generation, every teacher must confess in shame and sorrow of heart. An observer needs but to enter any public conveyance in any city, to be struck with the behavior of Young America and his entire lack of any semblance of respect for the rights and comforts of his fellow travellers.

This suggests most naturally the effect of environment upon the moral development of the child. While it is not the intention to appear in this paper as the "weeping philosopher," yet the mildest statement of facts would demand the assertion that in a very large percentage of the cases of moral perversion noticeable in our schools, the effect of parental government is either entirely wanting or is itself pernicious. The public school receives pupils from homes of every possible description and gradation, ranging all the way from wealth and culture to vice, ignorance and poverty. To these effects of early environment are added the ever present elements of the child's associates and his own natural and inherited tendencies. These are the problems set before the conscientious teacher. How best to overcome the evils of environment and heredity; how to awaken perceptions of moral truth in minds ignorant of the truth in any form. In many cases the task seems little less than hopeless. In others, much can be done. I have seen children coming from the most squalid and abandoned quarters of the city, develop into trustworthy and reliable young men and women. Again, girls who in the first year in the high school were notoriously dishonest and unreliable in examinations and recitations, have developed into steady, ladylike, scholarly young women, trustworthy and truthful, and who, I think, will make good teachers in later life.

There remains, however, another phase of the question that is by no means so satisfactory. In every school there will be found the pernicious character who is not only an open law breaker himself but the inciter of evil doing among those who would otherwise remain orderly and obedient. Such pupils are usually boys of confirmed bad habits and dominant wills; boys who have successfully withstood all attempts looking to their reformation, and being too lazy and worthless to work, much less to study, remain in school to

the annoyance and terror of the lady teachers, and do untold mischief to the school. It is customary to devote special attention to such cases, to waste precious time and strength upon the young reprobate in the vain effort to induce him to allow himself to be taught. Expulsion is regarded as the last resort. Nay worse, if his father be, as he usually is, a man of "*influence*" it is regarded as an heroic measure that must in nowise be applied, otherwise dire results might occur.

Now I speak advisedly when I say that in such cases as this expulsion, immediate and final, is the only remedy to be employed. Our schools are free,—yes, free indeed! Far too free to such young scamps as this. The plea for his retention in the school is the remote possibility of his reformation. Yet while he is receiving the suspensions, the admonitions, the interviews and tears, and the various other paraphernalia of moral suasion, he is doing the Devil's own work in the basement and on the play-ground every day, demoralizing the ninety and nine good boys who, but for him, would never have given any trouble. The good the school might do him is infinitely less than nothing, compared with the mischief he will do in the school. Such pupils have no more claim upon the rights and benefits of the school than if they entered it covered with the small pox. The public schools of our country are not Houses of Correction or Reform Schools, and in no case should such offenders be allowed to remain.

One of the most important elements of moral instruction in school, is discipline. Without it, assuredly nothing can be done. Order being Heaven's first law, is no reason for the school room being content with anything less. The pupil must be reduced to a state of incipient civilization before anything can be done either mentally or morally. He must lay aside the war whoop and be clothed upon with silence. He must be taught to obey in all things, both great and small. He must rise at the signal, move in line, in order and in time. Punctuality, promptness, obedience and silence are fundamental; no discipline is worth anything that fails in either of these respects.

The pupil who is a member of a disorderly class, where he sees the plainest demands of duty and common sense violated every hour, not only by pupils, but by teacher as well, is on the straight road to moral perversity. Contempt for law in one case readily begets contempt for law in all cases. Nothing remains worthy of his respect

or regard. Liberty to him becomes license. No law is just or right that imposes restraint upon any of his lawless desires. A badly governed school becomes a very hot bed for the rapid propagation of disorder in every form. Idleness, impertinence, impudence, disrespect, lying, cheating, flirtation, vulgarity and obscenity tread upon each other's heels, until the school with all its marvelous possibilities has become a veritable stench in the nostrils of all good people. Of all poor workmen, a poor teacher is the poorest; his failures and mistakes never wear out. Habits hardened into character persist to all eternity. The teacher who fails in discipline makes a failure that is vital, and that teacher is beneath contempt, who, conscious of a lack of power to command respect through good government, seeks to curry favor with the pupils by lax discipline and by encouraging impertinence and impudence under the name of familiarity—who conducts school upon the basis of "*having a good time.*" Discipline of body and of mind tend toward order and obedience. The very fact of being accustomed to do all things "decently and in order" begets an attitude of mind that is essentially law abiding and pure. The school is to be governed not merely to preserve the organization, but to teach objectively the true idea of government and the fundamental principles of ethics and morality.

It may be asked with some degree of pertinence by what forces are all these desirable results to be attained? How shall the vast mass of our school population be leavened with the wholesome principles of morality? It has not been the intention of this paper to develop a complete course of instruction in morals, however desirable such a course might be, but rather to indicate a few of the needs and secondly the more effective means at the disposal of the teacher for accomplishing these ends. These will be stated somewhat in the inverse order of their importance as it seems to me.

Among the potent factors for good influences in school life, is good reading. It is true, "A little learning is a dangerous thing" and it has sometimes seemed to me that that little consisted in the mere art of reading without the knowledge of what to read. The pupil taught to read is open to a multitude of temptations and suggestions of which his illiterate companion remains in blissful ignorance. It is only by teaching him what to read, that he is educated beyond the power of this temptation. It may be well to even strengthen this requirement. The struggle between vice and virtue is ever an unequal one, and it will not suffice simply to teach the



pupil what to read, but to see to it, that he reads it; that he learns to love good reading and acquires a taste for such literature as will lift him out of his daily life into the purer realm of his youthful ideals. It may be taken for granted that every pupil in school is reading something, has been and will be reading something, whether you will or not. The question is, what ought he to read? He ought to read biography. Our libraries are filled with biographies of men, whose life histories thrill the heart of every generous minded boy who reads them. He is, for the time being, Napoleon or Wellington, Columbus or Livingstone, Webster or Patrick Henry, and in this delusion finds himself quite as happy as if he were "The Red Handed Ranger of the Roaring Main." Nay more, for boy though he is, he realizes that he is reading facts, the groundwork of history, rather than the miserable spawn of an unnatural imagination. The girls, too, may find in the lives of Joan of Arc, Florence Nightingale, Louisa M. Alcott and Lady Jane Grey, food for thought quite as satisfying as Rider Haggard's "She," or any of the classic efforts of Mrs. Holmes.

Again, the pupil should read good fiction. The works of Thackeray and Dickens, of George Eliot and Hawthorne, are treasure houses of good influence in which no pupil, however frivolous, can linger long without receiving some better suggestions for his daily life. The boy or girl who has seen and known Colonel Newcome or Florence Dombey is better for that acquaintance, and those lessons so cunningly interwoven in the fabric of fiction clear the moral vision and quicken the sensibility as no sermon, however learned, could ever do. Virtue gains another champion and vice another foe in every youthful reader of the story of *Oliver Twist* or the *Scarlet Letter*—and the influence of such works upon the minds must ever remain one of the most powerful forces for moral training of the young.

The pupil should read poetry. This is an acquirement denoting some degree of maturity of mind. The tone of all true poetry is essentially healthful and elevating. The moralist can say with Columbus,

"For I believed the poets; it is they  
Who utter wisdom from the central deep.  
And listening to the inner flow of things  
Speak to the age of Eternity."



The ability to read and enjoy Longfellow, Whittier, Tennyson and Shakespeare, is in itself a liberal education. No pupil who thoroughly enjoys and appreciates such literature will be found sadly lacking in moral qualities, and the taste for such reading, cultivated and acquired in school, forms an ever increasing source of enjoyment amid the cares of after life.

The matter of devotional exercises in school is one that is apt to present peculiar trouble in certain cases. The privilege of reading the Bible without note or comment is a gracious condescension, when the literature that takes hold on hell is scattered broadcast all over our land, and if we stop to consider that this privilege is so restricted, not from the demands of Infidelity, however much it may approve, but from the various forms of religious belief itself, we are made to wonder whether it would not be better for the schools, at least, for the leading doctors of divinity to adopt that famous motto, "*In essentials, harmony; in non-essentials, liberty—and in all things, charity.*" Hampered as it is, and hedged about with difficulties, the custom of public devotion in schools, is yet capable of great good in the work of moral culture. The assembling of the school for purposes of worship, the mere reading of a chapter judiciously chosen, and reciting the Lord's Prayer, simply this, if reverently done, leaves a favorable influence upon the minds of the pupils for the day. Short lectures upon questions of school ethics, (for which a single bad day will furnish abundant subjects) may be made quite effective, and if followed up with pertinent quotations from the Scripture the lesson may be clinched permanently. I do not believe, however, the prejudice against devotional exercises in school finds great acceptance anywhere except in the minds of timid teachers. Let them be fully persuaded that they have something in this line that must be done. Let them go ahead and do it quietly, reverently, and conscientiously, and I believe the cases of interference will be found remarkably few. People are usually willing to grant to the teacher all the religious liberty that he deserves or has any use for, and it is not necessary for purposes of moral training that the entire school and neighborhood be converted to any special belief or made to accept any given creed. Common sense, properly exercised, is, in this case, like "apples of gold in pictures of silver."

Last and greatest in the instrumentalities for moral training, is the teacher himself. Far beyond books and creeds, infinitely higher than methods and rules made and provided, stands this living person-

ality, this incarnation of ethics and morality, this ever present standard of honesty, industry, justice and self-control. How important then, that the teacher enter upon this work filled with a sense of its grave responsibilities! The young man or young woman who expects to teach a short time for the experience or the pecuniary relief it may bring, finds in the outset an infinite number of requirements that were not "nominated in the bond." No true teacher ever did his duty to his pupils, his patrons or himself, who did not do vastly more than was called for in his contract. The highest, noblest form of instruction is not to be bought and sold; it must be given. The teacher whose heart is in the work, who feels and realizes the true dignity and responsibility of moulding character and influencing life, does not stop to consider the question of reward. Anxious days and sleepless nights, patience that endures and forgives and encourages, charity that suffereth long and is kind, that hopeth all things, endureth all things, that seeketh not its own, consummate skill and infinite tact in foreseeing and avoiding as well as meeting and conquering difficulties,—these are a few of the unwritten requirements that must be furnished for the work in hand. It is very easy to say, "I am not paid to worry over this or that tendency in my pupils, that I leave my work in the school-room and go home to *rest*," and I know of some whose boast it is, that they think not of school from Friday evening until Monday morning; but it is not so with all and I am persuaded it is not so with the majority. The teacher carries heart and soul into the work; the school and its success become vital to him. The minds and characters of the pupils become his study; their advancement and development his constant aim. The improper tendencies, he curbs; the pernicious associations and surroundings, he boldly interrupts. Pupils of demoralizing tendencies; of degrading habits and instincts he courageously removes. Let the moral atmosphere be cleared at whatever cost. Face the irate mother and tell her courteously, yet explicitly, that her daughter is a hoyden, a flirt, an impertinent and impudent creature, if the case require it. It is your duty to do it, however unpleasant, and any mother, who has the instincts of a woman, will thank you for your interest in her child's welfare. The one who has not, will abuse you and misrepresent you and say all manner of evil against you falsely, yet the interests of the child demand it; the common interests of the school, church and state demand it, and all

right minded people will support the teacher who has the courage to stand up for what he knows in his soul to be right.

The teacher is to be himself the model for imitation in countless cases. He is to be alive in thought and deed. *He must do something.* He must be a living commentary on industry. The school is a faithful mirror of the character and instincts of the man who stands at its head. Like begets like, here as elsewhere, and the pupil must feel the warmth of a living hand, the activity of a living brain, if he is to become alive and industrious. No teacher can command the respect or attention of his classes, who is not himself a student and a scholar. No pretense is so shallow as that of pretended industry, and nothing breeds contempt so thoroughly as indolence in the teacher. It is the fellow-feeling of common interest that opens the mind and heart of the pupil toward the teacher who actually studies and does so for the love of it; who has been over the road himself and experienced its difficulties; and who may be relied upon to know at least as much as the book does and perhaps a trifle more. That was a noble saying of Dr. Arnold, "I prefer that my pupils should drink from a running stream rather than a stagnant pool," and its principle of intellectual industry lies at the basis of all true and lasting influence upon the young.

Again, if honesty is to be found in our schools, it must be found behind the teacher's desk. If it is right and good to preach honesty during chapel exercises, it is infinitely better to practice it during the conduct of the recitation. It is a virtue best taught by object lessons. Nothing wins the hearts of children so readily as genuine honesty in the teacher; nothing estranges them so completely as the lack of it. Genuine knowledge of any subject inspires respect; pretended wisdom begets contempt. All honor to that teacher who is honest and frank enough to say "I don't know." To say it humbly—and then go home and find out. When questions arise that exceed the teacher's knowledge, if it be within the limits of his subject, a frank avowal of his ignorance need cause him no disgrace, provided he take the first opportunity of informing himself. No teacher can hope to be infallible, but the least and best thing he can do is to be honest. Again, the best teachers occasionally make mistakes; these are often recognized by himself on review, when no pupil seems to have noticed it. The moral quality lies in confessing to the mistake that is not discovered. There is no explanation necessary and the less apology the better. The mistake is clearly pointed out, the class



warned against it, and the lesson proceeds; but a lesson in honesty has been driven home that will last long after the Latin has faded away. Every pupil has seen and recognized the genuine element that prompted the confession, and the effect is wholesome. There is a moral efficacy in getting a thing right simply because it *is* right, and in many cases a frank and honest confession of ignorance satisfies the class much better than the statement that "*the text is corrupt at this point.*"

Honesty and frankness in acknowledging errors in judgment and discipline, are no less acceptable and refreshing to all parties concerned. Mistakes in government are inevitable; rebukes are administered that are undeserved; petulance or illness may provoke words that wound deeply and undeservedly; and the only decent way out of the difficulty, lies in a frank and honest confession of the fault. It is folly to think such things will be forgotten. A thing is never settled until it is settled right, and no teacher can long hope to exert moral influence, who is not honest enough to ask pardon for errors to which all are liable.

Another element of power in the teacher's character is sympathy. Christ was "tempted in all points even as we are." No true conception of the merits or faults of a child's character can be reached without a sympathetic study of his heart and motives. Sympathy with his desires and aspirations; intimate acquaintance with his trials and perplexities, are necessary before his real needs can be known or reached. Many a pupil of good instincts is misjudged and forced into the attitude of an offender simply through want of sympathy for his condition on the part of the teacher, or worse yet, through some preconceived idea that the pupil meant to be malicious or troublesome. Moral growth is necessarily slow. Our own progress is not at all times edifying to contemplate, and if so, how much more have we need to remember sympathy for the weaker will, striving against even greater odds. Sympathy with weakness; charity that sees the good intent, and courage to hope and wait for ends but dimly seen, are jewels in the crown of a successful teacher.

In this connection let me pause one moment to render honor where honor is due. Let me say that to the example of one man, formerly a professor in Michigan University, I am largely indebted for the noblest and best that is in me. A man of such sterling character, thorough scholarship, intellectual honesty and scrupulous justice, that upon every student who came under his influence, he



stamped his impress as with a white hot iron. A man preeminently manly, just and honest, who loved knowledge for its own sake and hated pretense and sham in his inmost soul. Who, in the discharge of his duty never shirked a responsibility nor concealed a fault. Who was his own most merciless critic and in his chosen field of work, illumined the subject taught, by the glorious light of perfect manhood and christian character. He laid his hand upon the dry details of Latin Syntax and they sprang into living realities. His class-room seemed to us consecrated to honest work and thorough scholarship, while far, far deeper than datives or subjunctives sank the lessons of a noble, just and generous life. The voice of that teacher is stilled; yet who shall measure his influence? Thrice fortunate were we, Mr. President, and all others who sat under his instruction, and shaped our lives after that living model of fearless manhood! The name of Prof. Elisha Jones needs no eulogy. His work lives after him in a noble foundation destined to glorious ends, yet I, in common with every one who felt and knew his character make free to add this tribute to his memory.

Finally, it is the teacher's personality that determines his worth and moral influence. The subject learned, takes color, not from what the teacher does or says, but what he really is. No amount of cant or gush can hide the hypocrite, and the example of a perfect manhood, rising grandly out of the daily tasks, teaches with tongues of fire. After all, what is there of real worth in life, but character? To this must education tend and by this test must all our work be tried in the last analysis. The spirit of Him who taught, not as the Scribes and the Pharisees, must be caught up and reflected back from our handiwork or else we have labored in vain.

In the words of him of the golden dreams,—

“Ah believe me brother mine, where two or three children are met together, unless he who is the spirit of gentleness be in the midst of them, then our Latin is but sounding brass and our Greek a tinkling cymbal.”

[Concluded from April number.]

NOTES ON THE NEW EDITION OF GOODWIN'S  
GREEK MOODS AND TENSES.

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CASKIE HARRISON.

X.

I pass now to some details. In § 259, "the distinction of tense . . . . . has no reference to the moods" is at least misleading in view of the cogent discrimination of M. W. Humphreys in Trans. Am. Phil. Ass'n for 1876, which I take to be conclusive.

After the analysis of §§ 261 sqq., which is a memorable substitute for the old desideration of *purpose* as an element in fearing-clauses (cf. old ed. § 43 C.)—being an attempt to fit a genus into one of its species—the reversal in the order of topics in § 303 is surprising. (cf. XII below, on § 926.)

In § 306, the explanation of  $\mu\eta$  —  $\mu\eta$  for  $\mu\eta$  —  $ο\upsilon$  as due to the desire to avoid repetition, is hardly adequate in a language that repeats negatives so freely as the Greek. More likely,  $ο\upsilon$  is the negative of idea (notion),  $\mu\eta$  of form; at long interval, the dues of the form unconsciously assert themselves; and no doubt  $\mu\eta$   $ο\upsilon$  is always to be expected.

In §§ 312, 313, difficulties are removed by bearing in mind that, whatever the conjunctive form of introduction, even when there is none, every subjunctive or optative is generically conditional (potential); hence  $\omega\varsigma$   $\alpha\upsilon$  is conditional as well as final, and the clauses after *verbs of trial* (§§ 486, 487) are final as well as conditional. Both sets are *causal*, *purpose* being *final cause* and *condition* the *theory of cause*; and both are *relative*, as being the dependent members of correlated combinations. Again they are both *indirect questions*, *purpose* being action taken to *answer the question* whether there is power to actualize a potential. The presence or absence of  $\alpha\upsilon$  is explained by its merely explicative character, just as the expression of a verb of fearing with a  $\mu\eta$  clause is a mere explication. There is in fact no such thing as a final particle; the finality grows out of the relation, as all the values afterwards expressed by special conjunctions originate without conjunctions; and the same particle

explicates various relations, as the same relation may explicate itself by many lines of conjunctive development (cf. *expecto si, ut, dum*. See further below.)

From what has been said, it does not seem that the Greeks were really aware of so many distinctions of contingency as are noted in §§ 235, 399—the forms with *ἄν* being mere explications of the others, as is the possible intent of the somewhat inconsistent footnote (1), page 144.

In conditions, the ultimate difference between indicative and subjunctive-optative is this: the indicative, not being itself conditional, acquires its conditional value only by relation; while in subjunctive-optative, which are per se conditional, this value is inherent and independent of the conjunction which explicates the relation. In other words, every general principle being conditional of its special applications, an indicative condition is to a subjunctive-optative condition as “a drowning man catches at straws” = “if a man drowns, he catches at straws,” is to “a drowning man would catch at straws” = “if a man should drown, he would catch at straws;” or as *volo* to *velim*. That is, the indicative may express the theory of condition by forms based upon and limited to a special time; the subjunctive-optative, by using future time, implies besides futurity the abstract relation outside of actual time; and it is emphasizing this merely relational and theoretic character of the combination that suggests remoteness of prospective realization for the optative and reflects upon the subjunctive the secondary idea of nearness or vividness; just as the indicative becomes the mood of fact in mere offset to the subjunctive-optative as the moods of conception. Perhaps it is this affinity of the future and the conditional notion that vindicates the use of subjunctive-optative in protases of general conditions, which are doubly conditional through the expressed relation and the general principle, and hence prefer to explicate modally.

In §§ 486, 487, the explanation is a crude substitute, not clearly grasped and not consistently followed, for a rough-and-ready predecessor; consequently, it is not conclusive. The apodosis after verbs of trial is expressed; it is the principal verb; and there is no ellipsis. There is no such thing anywhere as the kind of ellipsis Professor Goodwin imagined in the earlier editions, the attempt to supply which is simply to chase an infinite series of final causes. Nor is there any complexity of protasis and apodosis, except as every sub-

junctive-optative is an apodosis and implies a protasis; and the examples here are not like those protases that become indirect questions only by becoming object-clauses to a verb requiring such complement, as *ibo visam si domist*. Roby (§ 1754) states the misconception at length; and even Gildersleeve nods,\* though of course his filling of the ellipsis would be far different from Goodwin's. There is no ellipsis in these examples, because there is no way to attach the assumed apodosis; etymologically and logically, the clause need not be or be considered a technical condition, as the same conjunction explicates different relations and the same relation is explicated by different conjunctions, and relation depends ultimately for interpretation not on vague pronominal conjunctions or even on mood but on the circumstances of the case; and finally the conditional conjunction is at any rate only secondarily conditional, while these clauses are as old as the language. But, if we must consider the protasis as technically conditional, it is only as every subjunctive-optative is essentially conditional, as is the final clause, in whose case the conditional value has already been exhibited, and in temporal clauses and elsewhere. Condition is the theory of cause; purpose is final cause, that is the theory tested; the test (apodosis) is actual, the theory (protasis) conditional and potential; in other words, purpose is an action undertaken under the hypothesis that by it a certain result is possible (cf. § 612.) *Venio si videam, venio ut videam*, differ, if at all, only in the roads appropriated by later specialization, and not in the ultimate relation, which in the mood remains the same; the former explicates the essential hypothesis in *si*, implying "in the hope that" as a justification for the action taken, and suggesting that action as the effort to solve a problem of possibility; the latter, keeping the hypothesis, may be held to regard it as an apodosis expressing the possible manner of the main verb, to which *si veniam* might be appended as a protasis. In fact, it is possible to consider *venio si videam* as a double condition, equal to *venio si videam si veniam*; (cf. § 510); and, if there must be ellipsis, this is the only rational form of it. Professor Goodwin altogether misses the point of conditions like *ᾧ κτεiron εἰ ἀλώσονται* (§ 495), in which *ἀλώσονται* does not mean "were to be captured" (§ 697); *ᾧ κτεiron* involves (Gil. L. G., § 603) *ἔλεγον οἵ κτερεῖν* (cf. Madv. L. G., § 369). Mood and tense alike show that these are not causal in the sense that *θαυμάζω εἰ* is causal. The principle is § 490, where however

\*And yet, is it the nod of Zeus? (Il. A, 526, 527.)



the two indicative protases need at least a reference—though they do not seem to be covered by any single section. The element of *wish* ascribed to some of the protases here included may be either *for* or *against*. (Cf. Gil. L. G., § 598, and Wordsworth's "O mercy! If Lucy should be dead!", and Hebrew condition=prohibition, Students' Heb. Gr., p. 330. Goodwin continues to ignore *wish against*.) In point is § 612, though there Goodwin makes the conditional value secondary, losing the ultimate signification of the relations.

From what has been said, the exclusion of  $\epsilon\alpha\nu$  from interrogatives is invalid and impracticable. Such protases as occur in § 491, like all others under similar circumstances, become indirect questions according to their relation to the leading verb; if that verb implies question or answer, oral, mental, actional, and there is no other object for its complement, the originally antecedent protasis furnishes to the transitive verb the expected object or subject, as being the most or only available supply of that demand of mind; just as, the predicate being given—as in an impersonal verb—the next element afforded is regarded as the subject under the requirements of mental procedure. *Ei* may introduce subjunctive-questions, as it may introduce subjunctive-conditions (§ 454); the  $\epsilon\alpha\nu$  questions with subjunctive are chiefly the purpose-conditions already explained; the difference between the conjunctions and the relations they imply is not important enough to be distinguished with the optative or in Latin. Similarly, § 304 is over-discriminating.

## XI.

§§ 611 sqq.—621 sqq. The treatment of particles signifying *until* and *before* is, on the whole, greatly improved, though § 553 ought to be included; and references to *dum redeo* (Verg. Ec. IX. 23)=*while* I am returning=*till* I return; to Abbott (§ 184) for *to=till*, *till=to*, prep. or conj.; to Earle, Phil. Eng. Tongue, for modern provincial *while=till*, are in point. As the author does not make *conditionality* a fundamental differential, it is not easy to see his object in relating these temporals to conditional sentences instead of to finals—especially as his explanation of "protases after verbs of trial" cannot be accepted. Nor is the difference in mood with words=*until* after past and future forms respectively clearly explained by showing how what was an aim has become an inde-

pendent fact ; and there is no reason why § 614 should be degraded to finer print.

§ § 621 sqq. The theory of these constructions could have been clarified by a correlation of (1) negation of priority, (2) priority of negation, (3) continuance of negation, (4) negation of continuance ; (1) (2) are interchangeable, but not so (3) (4); (1) (2) must be *οὐ πρίν* ; (3) may be *οὐ πρίν*, *οὐχ ἔως* ; (4) must be *οὐχ ἔως* ; *πρίν* can=*until* after affirmatives only when the affirmative is continuative. Verbs of *ceasing*=(3) or (4). More stress needs to be laid on divergence of Latin or Greek for *priority*=*prevention* of action merely conceived, hindered (§ 626 ; cf. Madv. Gk. Synt. § 167).

## XII.

§ 662. We have the same definition of *oratio obliqua*—one which is either circular or meaningless. “Conform to the construction of the sentence in which they are quoted” is either untrue or truistic ; it either means that an indirect quotation is one that takes the construction proper to indirect quotation—which may be true and must be useless ; or it implies a kind and a degree of conformity which do not exist. Indirect discourse has for its only distinctive feature the readjustment and reduction of an old assertion to new relations, primarily, pronominal, secondarily, modal or temporal ; but this readjustment and this reduction have not, even in one language, a single invariable form, they have no form that is not a part of other constructions. No change of form is essential, no subordination by conjunction or mood is indispensable ; in fact, a subordinating conjunction may even accompany the direct quotation (§ 711.) The definition is a part of “general grammar ;” and here, as well as in the case of mood, as the mind must classify, the teacher or writer must exempt the immature pupil from a necessity he cannot ignore. Gildersleeve (§651), in avoiding mechanical reduction, becomes too vague. § 684 is not satisfactory. (Cf. § 136 and Am. J. Ph. IV., 428.) The difference between “comp. inf.” and “acc. with inf.” is simply in degree of integration, whereby one act becomes a mere preliminary part of another. The infinitive (as a verb) must always have a subject in thought (§ 744); but, when the actions are integrated, the identical subject of both verbs acts at once for both. (A. & G. have confused the matter, § 271.) It is not “the meaning of the leading verb,” but closeness and continuity of thought, that

debars a subject expressed from the dependent verb ; an expressed subject would be gratuitous and intrusive.

My chief comment on the Infinitive and Participles concerns the sections on their theory, where I find a lack of clear and profound thinking and several Bunsbian opinions, in spite of considerable improvement of a practical character. To discuss the various words and phrases that illustrate this general comment would require more time and space than I can afford ; but I suggest, as a sign, a comparison with Gildersleeve's way of interpreting the article in the articular infinitive (cf. his *Just. Mart. A*, 3, 9 : 10, 16). § 786 ought to refer to §§ 438, 736 ; and § 803 to § 623. In § 850, the Latin example is not in point, as *se absente* belongs to *tentari*, and the expression "difference in meaning" seems to have no meaning at all (cf. *Madv.* 428, 1). In § 867, we have a telling contrast to § 109, N. 9 of the old edition and to § 277 N. 3 of revised *Grammar* of 1879 (cf. *Gil. Just. Mart. A*, 4, 19). In § 926, the statement seems to imply surprise that *δεῖ* does not take a dative agent—a misplaced and misleading implication. (Cf. X above, on old ed. § 43, C.)

### XIII.

Omitting some fundamentals from lack of space, I close with a brief gleaning on sundry heads.

§ 22. In some uses, English shows relative tenses more freely than Greek, as in all future conditionals or quasi-conditionals.

§ 25. The modal value of present and impf. (as *Th.* 1, 28, 4, 5, *εἶπον, ἀπάγωσι* ; 53, 3, *λύετε* ; *Verg. Ec.* 4, 3 *canimus*) is not adequately brought out. Cf. § 490.

§§ 27, 49. Pres. and pf. are reciprocals ; the completion of one act=the continuance of a state or of another act ; hence the power of reduction is noway "peculiar" (cf. §§ 32, 51.) After what was said above on the relations of pf. and aor., there is nothing surprising about § 61. § 60 is paralleled by colloquial "*did* you know ?" = "do you know ?" and by the mother's "*did* it want a lump of sugar, then ?"

§ 75 is another example of explication. I have not seen attention called to the future participle used as coincident with its leading verb ; cf. *Isoc. Paneg.* § 185, *ἔσεσθαι ἐδεήσονλτας* ; also Eng. "I should have liked to have seen," "He is a man who I should not think would do such a thing," "He wants that I should go." (Cf. §§ 41, 113, 211, 428, b.)

§ 76. The persistence of this verb in indic., where subj.-opt. would be expected, ought to be noted (cf. § 553, where add to examples, Xen. Hell. II., 2, 16; II., 3, 4, 7; also §§ 591, 592.)

§ 127. The future element is involved in the leading verb: cf. Eng., "He said *to learn* the next page" = "He told us to learn." Goodwin's use of such expression as "*offending aorists*" (§ 127), "*fluid language*" (§ 239), "*venerable Canon Davesianus*" (§ 364), "*borderland between past and future*" (§ 448), are very significant of his growth.

§§ 144, 146 end, leave us in doubt how this participle combines with the *perfect*. I am inclined to believe that, when the matter is fully worked out, it will be found that the identical time-reference in the participle here is no more and no less than the coincidence of § 150. For § 150, a reference to some papers in Trans. Am. Phil. Ass'n is in point. (Cf. above on § 75.)

§§ 165 sqq. and 322. These state the groove or rut in which the Greek language ordinarily moves; but, abstractly, there is no more objection to the optative here than to its use in a condition based on and dated from the present, as is its normal use (cf. Hayman, Od., App. I., 15; also M. T. § 252 R. 2, § 409.)

§ 172 points the Latin contrast (cf. Gil. L. G. § 517 R. 2; § 598, R. 1, 2.)

In §§ 176, 558 sqq., assimilation is considered merely formal, as in § 239; it is really the recognition that the dependency of a potential is *a fortiori* potential (cf. also § 334.)

§ 220 is an extension of 219; *ἄν* is attracted to the verbs of modified assertion.

In § 244 end, the example Od. IV., 544 again suggests the unreal fut. perf., above referred to; cf. Verg. Aen. VI., 879, and Liv. XXII., 60, 15 (peregisse.)

§ 249, in the last member of the first sentence, lays a burden on somebody who ought to believe the rest of us.

§ 254 needs more distinct reference to impv. as a virtual protasis of condition.

§ 369. The confusion is explained in the same general manner as *εἰ, ἔάν* interrogative above: *μή* = interrogative only for the *fear* which involves the wish to remove it by settling negatively the question whose uncertainty produces it. The rendering of the first example in point is cumbrous for "we shall not doubt through fear"



(=we shall know.) So § 371=to think with fear; § 373=to refuse through fear; § 376=to doubt through fear.

§ 368. I confess myself unable to see the practical importance, either of the suspense or of the discovery. The conditional relation is inherent in the reciprocal attitude of the elements involved, and is not a secondary result of some other relation distinctly expressed by a specialized conjunction; all subordinate conjunctions are relatives, or deputy-relatives (as *πρίν, ἐστὲ*); but, as such, they are indeterminate to vagueness, and offer no specific suggestion of direction in development: this must still be sought for in the original relation of the elements (cf. uses of *ὥς, ut*, and the clause after *expecto*.)

§ 410. It ought to be noted that unreal apodoses, while in the same general present or past time as their protases, may be relatively future to them. In "If I had the money, I would pay you," the protasis belongs to the specific moment of speaking; the apodosis does not.

§ 412. I may be permitted to refer to a forthcoming paper of Mr. M. A. Bayfield's and my answer thereto in the *Classical Review*.

§ 467, like § 155, § 534, is certainly a misconception. The generality is directly expressed in the indicative tense; else § 24 errs.

§ 511. I do not remember seeing attention directed to the illustration of the same general principle in the negation of two propositions in relation, either of which may be true alone; cf. Dem. de Cor., § 179 (the famous climax), Cic. Mil. XXXI., *neque—motu*. Similarly, as an affirmative combination of the same nature, Psalms XV., 4, "He that sweareth to his own heart, and changeth not."

§ 513 is an unworthy thirty-year survivor. "Now" and "then," in the logical sense, are conjunctions; adverbs become conjunctions by acquiring a sentence-relation. "Now Barabbas was a robber" illustrates the conjunction *now*; in conditions, *then*, always implied as the apodotic introductory, is the conjunctive sign of reciprocal subordination. Professor Goodwin will find in Webster and in Maetzner *then* as a conjunction; it goes back to Anglo-Saxon.

In §§ 565 sqq., 575 sqq., there is still some confusion due to the relations of *purpose* and *result*, which are not adequately treated.

§ 736. At last we have, though only as an alternative, the true explanation of *μή* by analogy; the wonder is we have had to wait so long for so little.

P. S.—Since these notes were written, I have read the only professed review that I have seen—the *Nation's*. It is a pity all reviews are not signed, that we might

estimate the views by the writer or the writer by his views. No doubt there is a certain strength added to a writer by his absorption into the impersonality of a reputable journal; no doubt there is a certain repute added to a journal by its absorption of the personality of a strong writer. However these things be, it is worth the while of anybody to acquire a masterly conception of one writer and his works just as a touchstone for the critics and criticisms of those he has to read by report. Nobody who tries the experiment can fail to conclude that, little as is the wisdom with which the world is governed, it is the very quintessence of sagacity as compared with that which is most often manifested by the reviewer. The *Nation's* review is a fair type of the foreordained favorable, constrained by traditional propriety to work off a few commonplaces by way of reservation. It is conventional in the beginning, random in the end, inadequate everywhere. It notes the changes from the first edition without any misgiving that at least some of these, depending not on new discoveries but on old reflection, ought to have been made years ago,—in fact should never have been needed. The reviewer credits his author with powers he has never shown, and he quotes from the preface without comprehending its most significant acknowledgments. He desiderates certain doctrines, without seeing that the details he mistrusts grow out of just the principles and the general point of view he commends; and he never suspects the delicate irony of complimenting a writer for a certain point of view when that writer confesses his deepest indebtedness, and illustrates it even more emphatically than he records it, to the very apostle of the opposite point of view. His exercise of the reviewer's inalienable right is very tame and somewhat forced; he does seem to have the current confidence in justification by faith in statistics, not remembering what the eunuch said to Philip; but he has not found all the misprints.

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## COMMUNICATIONS.

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### *SOME QUERIES CONCERNING THE PAST AND PRESENT TREATMENT OF THE ENGLISH VERB*

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*To the Editor of THE ACADEMY:*

In one of Burke's famous papers, in which he is speaking of certain fanatics, we find the following sentence: "They cannot strike the sun out of heaven, but they are able to raise a smouldering smoke that obscures him from their own eyes."

Now it would seem to go without saying that the assertions in the two clauses of this sentence are exactly similar and so both are in the indicative mode. If any one doubt this, let him make an interchange of the two verbs and he will find it difficult to say which

clause contains the more explicit statement. And would any honest teacher undertake to make a thoughtful pupil perceive that the one verb is indicative and the other "potential"?

A blockhead would be satisfied with being told that "*can*" is a sign of the potential mode, and that would be the end of his thought about it. And yet most writers of text-books of English grammar persist in the assertion that "*may*," "*can*," "*must*," and so forth, are signs of mode and they call them auxiliaries.

But will not this matter of auxiliaries bear a little questioning? Let us take a few examples. "Can," we have already disposed of.

Henry is permitted to have a holiday to-morrow.

He *may* spend the day in the country with his cousins.

Henry ought not to be late at school.

He *should* learn that punctuality is the life of business.

Henry must not go abroad to-day.

He has to stay and amuse his sick brother.

Now is it not doing violence to the common sense of boys and girls who want to learn English, to insist upon their learning different modes for the parallel clauses in sentences like the above, or in any similar direct statements?

Another question about the so-called auxiliaries. Is it not an injustice to these poor unfortunates so defective in their make-up that they scarcely claim to have either mode or tense, to compel them to the service of perfect verbs? Why should not the "*auxilia*" come from just the opposite direction? Why should the defective "*ought*" be allowed a treatment different from that given to other defective verbs? Is it simply because *ought* has the privilege of prefixing a "*to*" to its infinitive and the others leave it off? A lame and impotent conclusion truly.

Why, then, should we not treat the whole category of defective verbs in the same way we do *ought*? In fact all writers of English do thus treat them, no one of them being used without an infinitive to make up its deficiency, though the process is given a different name. Thus we rob the poor in the service of the rich.

But if the present theory and practice in regard to auxiliaries continue, should we not, to be consistent, add to the list such examples as: He is bound to go; he is compelled to go; he is obliged to go; he is permitted to go, and so on without limit? Are not such expressions *auxiliary* to the infinitives that follow them just as truly as the verbs commonly so-called, *may*, *can*, *must*, and so forth.

It may be asked, what is to be done with *shall*, *will*, *have*, *be*, and *do*? I see no objection to using them as we now do, the first three for tense formation; *be*, to form the passive voice; and *do* for emphasis, interrogation, and negation. In this way we dispense with all auxiliaries, as far as mode is concerned.

Among the teachers of English, who are readers of *THE ACADEMY*, there are doubtless those who are able to discuss this subject thoroughly. To such the present writer would say: "A penny for your thought."

*Quincy, Ill.*

WM. B. CORBYN.

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### BOOKS RECEIVED.\*

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*Instruction in Analytical Geometry.* (Der Unterricht in der Analytischen Geometrie.) Dr. Wilhelm Krumme. Braunschweig: Otto Salle, Publisher. 1889.

It is estimated that Germany produces yearly from 300 to 400 works upon mathematics, including smaller pamphlets, but not periodicals. Considering the quality of these books, it is certainly astonishing that readers should be found for so many; for they cover the whole range of mathematics, from arithmetic to the most abstruse departments of the Calculus. They are not books for circulating libraries, nor are many of them ordinary text-books for lower schools; but most of them are the results of years of hard labor and careful thought, each having its distinctive features, and not being a simple compilation, such as many of our American books of a similar character are wont to be.

That they do find readers is certain, since one finds few of this class of books over five years old that do not bear the imprint of the "second edition" upon them.

One of these numerous mathematical publications of 1889 is Dr. Krumme's book upon Analytical Geometry. The English language can boast of many excellent works upon this subject, most of which, alas! are little read; but few of them possess the excellencies of Dr. Krumme's little book. A translation of it into English might quicken

\* Any of these books may be more fully noticed hereafter.



the blunted taste for this beautiful branch of mathematics in this country.

The relation between Analytics and Euclidian Geometry, and its connection with the so-called Modern Geometry, are well described, and many questions that trouble beginners, as to the application of analytics, are answered. The theory of Poles and Polars is introduced and most clearly discussed. The limits of the book have not permitted the introduction of the Determinant notation. This omission by no means injures the book for a beginner.

Here are a few problems, showing the applications that can be made:

1. Find the eccentricity of the earth's orbit, having given the greatest and least value of the apparent diameter of the sun, under the supposition that the earth's orbit is an ellipse.
2. To determine the relation between the distance of the earth from the sun and the velocity of the earth in its orbit.
3. To determine the apparent radius of the sun at any point of the earth's orbit.

The discussion of such problems, in an extremely simple manner, shows the student at once what a powerful means of analysis he has in his hands, and encourages him to work.

More examples for practice might have been added to each chapter with advantage, but the principles are most thoroughly discussed, and the careful study of these will enable the student to solve all the problems that abound in such numbers in our own and English textbooks.

If mathematical books should ever multiply in this country with the same rapidity as in Germany, may there occasionally be a book produced with the merits of this of Dr. Krumme.

English Classic Series, No. 85. *The Skylark and Adonas*. With other Poems. By Percy Bysshe Shelley, with introduction and explanatory Notes. By J. W. Abernethy, Ph. D., Professor of English Literature in the Adelphi Academy, Brooklyn, New York: Effingham, Maynard and Company, Publishers.

Riverside Literature Series. *Longfellow Leaflets*. Poems and Prose Passages from the works of Henry Wadsworth Longfellow, for reading and recitations. Compiled by Josephene E. Hodgdon. Illustrated. Houghton, Mifflin and Company. Boston: The Riverside Press, Cambridge.

*Laboratory Manual of Experimental Physics*. A brief course of quantitative experiments intended for beginners. By Albert L. Arey, C. E., Instructor in Physics, Rochester Free Academy. With illustrations. Syracuse, N. Y.: C. W. Bardeen, Publisher. 1890.

Appleton's Mathematical Series. *Numbers Universalized*, an Advanced Algebra. By David M. Sensenig, M. S., Professor of Mathematics, State Normal School, West Chester, Pa. Part Second. New York, Boston, and Chicago: D. Appleton and Company. 1890.

The Riverside Literature Series. *Lays of Ancient Rome*. By Thomas Babington Macaulay, with the author's introductions, and additional notes. Houghton, Mifflin and Company. The Riverside Press, Cambridge, Mass. 1890.

Heath's Modern Language Series. *Tales from History*, by Dr. Friedrich Hoffmann. Edited with notes by H. S. Beresford-Webb, late Assistant Master at Wellington College. Boston, U. S. A.: D. C. Heath & Co. 1890.

*The Working Principles of Political Economy*, in a new and practical form. A book for beginners. By S. A. Macvane. New York: Effingham, Maynard and Company, 771 Broadway, and 67 and 69 Ninth Street. 1890.

Two Great Teachers. *Memoirs of Ascham and Arnold*, with Introductions. By James H. Carlisle, President of Wofford College, Spartanburg, S. C. Syracuse, N. Y.: C. W. Bardeen, Publisher. 1890.

*A German Reader for Beginners* in School or College, with Notes and Vocabulary. By Edward S. Joynes, M. A., Professor in South Carolina University. Boston: D. C. Heath and Company. 1890.

*Exemplaria Graeca*. Selections from the passages for translation in the Greek. By John Young Sargent, M. A., Fellow and Tutor of Hartford College, Oxford. Oxford. At the Clarendon Press. 1889.

Pedagogical Primary Series, No. 1. *A Primer of School Management*. Syracuse, N. Y.: C. W. Bardeen, Publisher. 1890.

*How to Preserve Health*. By Louis Barkan, M. D. New York: Exchange Printing Company, 47 Broad Street. 1890.

*History of Egypt*. By F. C. H. Wendel, A. M., Ph. D. New York: D. Appleton and Company. 1890.

# THE ACADEMY:

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WHEN AND HOW GEOMETRY SHOULD BE TAUGHT.

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There are two questions to which I wish to draw your attention for a short time,—questions which in their bearings and relations are closely connected, and whose correct solution will add not only very materially to an improvement of the standard in mathematics of our various schools, but also to the intellectual development of the pupils. These questions are :—

“ *Do we introduce the study of geometry at the most suitable time in the training of the pupils, and do we present it to them in the best manner?* ” To both I emphatically answer *no*, and it will be my object to show why I do so, and to explain, at the same time, a few methods I have advantageously used in teaching geometry.

Before proceeding to this, I wish to call your attention to a brief review of the history of mathematics, down to the time when modern algebra was evolved. The first scientific consideration of mathematics we find in the Ionian school of philosophy, which was founded by Thales about 650 B. C. Geometry was the prominent branch of mathematics to be studied, and we hear that in the schools of philosophy and learning which Pythagoras and his followers founded during the fifth century B. C., geometry was made one of the chief essentials of a liberal education. From that time it re-

mained the leading branch of learning and experienced so rapid a development, that Euclid could, about the beginning of the third century B. C., write his "Elements," a book which was designed to become the standard text-book of the world, and to remain so for many centuries. During all this time the field of algebra was a *terra incognita*. We know that only a few disconnected problems were propounded, which however were solved either rhetorically or by means of geometry. The first step forward was made in the syncopated algebra of Diophantus, about the beginning of the fourth century A. D. Here we, for the first time, meet with symbols, but these are not symbols in the sense in which we use them, but simply abbreviations, which Diophantus introduced into the text in the course of his reasoning. Thirteen centuries elapsed before the symbols of operation were invented, so that we date the birth of modern symbolic algebra from the sixteenth century A. D.

It seems to me significant that geometry should have been evolved before algebra, and it will be well worth our while to investigate the causes for this. The human mind is not a product of chance, but is constructed on certain great principles. It possesses vast possibilities for work, to it have been given well-defined powers for doing this work; but, like the healthy body, it has desires and cravings for something besides work, desires by which we should be guided with respect to the mind, just as much as we should be, for instance, by the sense of hunger with respect to the body. Prominent among these gifts is the sense of rhythm. Surrounded on all sides by a universe which is founded on rhythm, we cannot escape from recognizing it. The blue vault of the heavens, which stretches itself symmetrically in all directions above us, the wide sweep of the horizon, which encompasses us on all sides, are facts which would early impress themselves on the mind of man. Nature is in this our great teacher. The rude savage shows us by the symmetry of his hut, how he has begun to learn the lesson; the more civilized nations reveal the same fact in their architecture, their literature, music, and science. Living in the midst of a nature that abounds in symmetry, is it surprising that, when the Greek philosophers turned their attention to a study of nature and natural phenomena, they soon began to investigate the laws which governed this symmetry? This, however, is geometry, the science of space. We can now readily see why it should have been developed before algebra, the science of time.



The sense of rhythm appears in the child at a very early age. Who has not watched little children at play and has not noticed how they will be led by this sense? The little ones, who are making their first mud-pies, attempt to mould them into symmetrical shapes, and though the little muscles may not be sufficiently trained always to produce accurate forms, nevertheless, the attempt will reveal to us how strongly the craving for symmetry is present. One entire branch of child-culture is based on this fact and to it owes its success. I refer to the Kindergarten.

Should we, however, stop here? Should we not rather bear this fact in mind and educate the children in such a manner that they may have throughout a symmetrical and rational development of mind and body? Let us remember, then, that we have to deal with minds that are strongly imbued with a sense of rhythm, minds which will grasp the idea of space sooner than that of number or time, and, consequently, will more readily comprehend the laws of symmetry with regard to space, or the science of geometry, than that of algebra. Will it not seem rational, then, that in training these minds the study of geometry should be begun before algebra? I know from actual experience that the best results may be obtained in this manner.

This conclusion will, however, be very much strengthened by an investigation, from a psychological standpoint, of the difficulties which geometry and algebra offer to the beginner. Time will allow me to touch upon only a few of the most salient points.

The use of symbols to denote quantity is the first obstacle in the path of the beginner in algebra. It is impossible for the pupil to recognize, from the start, the great advantages of symbolic notation. Explanations on the part of the teacher will be of little account, until the pupil has seen for himself that these advantages exist. Nor is he to be blamed if he does not do so at once. We cannot expect him immediately to comprehend that this  $A$  stands for some quantity, and that  $A$  for another, while a third  $A$  has no assigned value whatever. The amount of abstraction, necessary to use three such  $A$ 's in three successive examples without any confusion of thought, is hardly to be demanded of a pupil just entering the high school. Have you ever noticed how pupils often dislike to solve literal equations, and have you asked yourselves why this should be the case? The reason lies simply in the fact that they are not thoroughly familiar with symbolic notation and that, therefore, such equations

offer to them something intangible and abstract beyond their comprehension.

The more concrete geometry not only does not offer this difficulty, but, if made to precede algebra, will prepare the pupil for a rational comprehension of that branch. Here he will very quickly see the advantage of using a symbol to represent a line, an angle, etc., and because the symbol will always stand for this concrete concept, he will readily learn to manipulate symbols without any great difficulty. I have, in fact, had thirteen-year-old boys, after a few months' work in geometry, solve simple equations without any further explanation.

A second and greater difficulty is to be found in the study and comprehension of negative quantities. If we will give this subject a careful consideration, we shall readily see how utterly impossible it is for an average high-school freshman really to understand negative quantities. What philosophy, within the reach of such pupils, will convince them, e. g., that the product of two *negative* quantities will be *positive*? The book says so, the teacher corroborates it, therefore it must be true and must be accepted. Is this, however, the way to develop self-reliant and independent thinkers? How difficult it was for the human mind to grasp the idea of negative quantities, may be seen from the fact that so many centuries elapsed before they were considered. Even Cardan, who, about the middle of the sixteenth century A. D., did much for algebra and, among other things, proved that the imaginary roots of equations always occur in pairs, understood negative quantities so little, that, in discussing negative roots, he would assign no reason to these "sophistic" quantities, which he said were ingenious, though useless. It therefore seems rational that the minds of the pupils will need some careful preliminary training to enable them to cope with this subject, and in no way can this be better effected than by means of geometry.

With the concrete line, angle, etc., before his eyes, the pupil will soon learn to distinguish the force of a difference of direction; he will learn to feel the value of the zero-point, and thus the road will be paved toward a clearer comprehension of negative quantities.

There are many other questions in algebra which would be less difficult for the teacher to explain, and for the pupil to understand, if the latter had a geometrical training as a foundation. Which, for instance, is easier to comprehend;—the computation of areas, or the solution of an affected quadratic equation? Certainly the former, and yet the latter is nearly always taught first.

In Europe the force of these arguments has been recognized, and in the schools of Germany geometry is invariably presented to the pupil before algebra. It has always been surprising to me that we should pursue the opposite course; but it has pleased me to see that some of our leading educators favor the plan of having geometry precede algebra in the curriculum of our schools. In this connection I cannot refrain from quoting from Mr. W. G. Spencer:—"However excellent arithmetic may be as an instrument for strengthening the intellectual powers, geometry is far more so; for as it is easier to see the relation of surface to surface, and of line to line, than of one number to another, so it is easier to induce a habit of reasoning by means of geometry than it is by means of arithmetic." It seems to me that we may safely follow in paths that have been so well indicated.

In determining *how* geometry should be taught, we must first clearly see what object is to be attained by its study. It is a lamentable fact that there should still exist so little unity of action between our educational institutions of various grades. Usually the high-school demands a regular examination of the grammar-school graduates, before admitting them, while the colleges in turn demand an examination of the high school graduates. In consequence of this, we often have the sad result that we lose sight of the main object of the various branches of study, and that the pupil receives instruction in them, in order to enable him to pass these examinations. This seems to me one of the reasons by which we may account for the perverse and irrational manner in which geometry is taught in so many of our schools. Though every teacher of mathematics, especially of geometry, will acknowledge that his object is to develop the reasoning faculty of his pupils, nevertheless, in practice, many teach it in a manner by which that object cannot be best attained. I have, in fact, had teachers tell me that they were obliged to teach geometry by the "cram-method," in order to prepare the pupils for passing certain examinations. By this method, however, we shall chiefly train the memory of the pupils, as Mr. J. W. Mac Donald has so admirably shown in his little book: "Geometry in the Secondary Schools." In this book a method is recommended which can only be crowned by the best of results. This is the method of original demonstration, a method I myself have successfully adopted and tested for several years. Instead of tracing out and memorizing the reasoning processes of another, the pupil is by this method obliged

to discover the definitions and to work out the proofs for himself while it remains the duty of the teacher to guide him judiciously in this, and to present the matter to him in a well-graded logical sequence.

We will suppose, for instance, that a class is just beginning the consideration of triangles. Most of the pupils will know what a triangle is, and it remains to study and classify the various kinds of triangles. Instead of telling the pupils the names and definitions, I send one to the board to draw a triangle. Another pupil will draw another triangle of different shape, and so on, until either the inventive faculty of the class is exhausted, or we have an example of each kind of triangle. We then study these various triangles, to see wherein they differ, and only after the class has gained such a knowledge, would I give to the pupils the names of the triangles, leaving it however again to the class to formulate the definitions. In this manner the pupils will not only learn to think correctly, but also to express their thoughts correctly. Sometimes the progress may seem rather slow, but by patient perseverance much better results will be obtained in the end. Some such results, that have seemed of special importance to me, are the following.

In the first place, an independence of thought will be developed in the pupils. When they begin to see that they can find the demonstrations of propositions without the help of books or much, if any, aid from the teacher; when they furthermore perceive the subject unfold before their eyes, and begin to recognize how each step is a link in a long chain of evidence, they will gradually awaken to the fact that they are not working for the school or the teacher, but that there is something beyond this. They will grow more interested in their work, and will learn to know certain things, because they themselves have found out the reason for them. The force of this argument has frequently been strongly impressed on my mind by finding that after some work in geometry the pupils would be less willing to accept any statements simply on authority. If they did not understand the reasons, they would ask them of me, sometimes, indeed, asking questions that were rather puzzling, though nearly always of a sensible nature.

The same spirit of independence I have seen revealed in another manner. When, for example, the pupils would for any reason think that I was about to give them any aid in a proposition, they would beg me not to do so, as they wished themselves to find the solution.



I think, also, that by means of geometry, taught in the manner recommended, better than in any other way, those pupils may be reached who, with good capabilities, have either fallen into bad habits of thought or have never had good habits, and therefore may seem sluggish or inattentive. If we begin early enough in this direction, and have a little patience, the fault, I am sure, may be removed. There is, however, another result, whose bearings are well worth studying.

The proofs, as we find them in Euclid and in many of our textbooks, give the reasoning by which the results are reached, entirely in a synthetical manner, without any analysis. This seems to me even a greater objection to their use than the fact that they tempt the pupils to trust to their memory rather than to their reasoning powers. For if these proofs gave the analytical process by which their author obtained his results, the pupils might gradually learn to analyse from studying examples, whereas now very many simply memorize a proof of whose origin they have no idea. The method of original demonstration, on the other hand, compels the pupils to analyse the propositions, and in this manner they are subjected to a mental discipline which is invaluable. My boys, for example, when they have occasion to prove the equality of two lines or angles, will immediately attempt to find or to construct two equal triangles which shall contain these lines or angles. They thus gain very clear ideas as to why they draw certain accessory lines, and will learn to see the connecting link between the hypothesis and the conclusion. I find it a very useful practice in each case to have the boys write out the hypothesis and conclusion of a proposition, before attempting the proof. This will accustom them to examine carefully what they are to do and the means they have with which to do it. It will readily be seen of how great an advantage such preliminary training will be to the pupils in solving problems in arithmetic and algebra.

The spirit of analysis, which may be created and stimulated by means of geometry, will be of much greater importance to the pupils than the actual amount of geometry they learn. It accustoms them to attack any new subject in an orderly and systematic manner, to group new acquisitions of knowledge, and to make good use of what they have already learned. It is a condition of mind which will be alike useful to the professional man, the business man, and the artisan.

There may be some difficulties in the way of attaining the end in view, but they are incomparably less than the difficulties which confront us in using the old methods, while the results are of a much higher order. The objection has been raised, that it would take too much time to teach geometry by this method, but that cannot hold. For aside from the fact that it will be of greater benefit to the pupils to cover the ground of one chapter in this manner than of half a dozen in the old, I have found my own results to refute the objection. Last September I started a class of boys, ages 12 to 14 years, in geometry. We used no books, and found very little outside work necessary; but, with three recitations of three quarters of an hour each, weekly, we have covered the following grounds:—The fundamental properties of rectilineal figures, triangles, quadrilaterals, and polygons, the study of areas, and part of the work on the circle. This subject will be completed in a few weeks, and I expect to finish the subject of proportion before I close in June. The boys have been greatly interested, have shown a remarkable progress in thought-power, but have in no way been overtaxed or burdened. An inevitable conclusion is that the work must be adapted to the psychological development of the pupils.

I therefore advocate the following: Geometry should not only precede the study of algebra, but should be introduced into our grammar-grades. Far from being an extra burden to the pupils, it will, if two or three hours weekly be devoted to it during the eighth and ninth grades, greatly facilitate the work in arithmetic and other branches. It will also give the large majority of pupils, who never enter the high school, a mental discipline which could be gained neither through arithmetic nor in any other manner, while those pupils who do pursue higher courses of study, will be prepared to advance more normally and rapidly, and the work of the high school will be better and of a higher order. The time seems propitious; form study is being introduced in the primary school work, and in such a manner the pupils will be prepared for the more advanced work. To give the pupils the discipline desired and to gain our end, geometry must be taught by the method of original demonstration. Let this be done and, I am confident, we shall have vastly better results than are now obtained in the majority of cases.

## SUGGESTIONS FOR A COURSE IN ELEMENTARY INSTRUCTION IN PHYSICAL SCIENCE.

PROF. H. E. ARMSTRONG.

[We give below, in somewhat abridged form, the Suggestions for a Course of Elementary Instruction in Physical Science, presented by Professor H. E. Armstrong, at the recent meeting of the British Association for the Advancement of Science, and approved by that Association. In them will be found much that is not new, but they are in all cases definite and practical, they represent the views of an important body of men, and they give an insight into the methods and conditions of science teaching in British schools.

In this connection we wish to quote one sentence from the report of the Committee of Inquiry, a sentence that cannot be kept too constantly in view by teachers and friends of education everywhere. "It cannot be too strongly insisted that elementary physical science should be taught from the first as a branch of mental education, and not mainly as useful knowledge."—*Editor of THE ACADEMY.*]

Chemistry as usually taught loses greatly in educational value because pupils are told, more often than not, that 'so and so is the case,' instead of being taught *how it has been found out* that such is the case; indeed that which has to be proved is usually taken for granted. Practical chemistry has hitherto, as a rule, been interpreted to mean the preparation of a few gases, &c., and the analysis of simple salts. Much useful information may be and is occasionally imparted during the performance of exercises of this kind, but the tendency undoubtedly is for analysis to degenerate into a mechanical drill, and, looking at the question from the practical point of view, and considering what is the general outcome of such teaching, probably we are bound to agree that the results thus far obtained are usually unsatisfactory. The difficulty, however, is to devise a course sufficiently simple both in conception and when carried into practice, the cost of which is not too great.

### STAGE I.—*Lessons on common and familiar objects.*

The first stage of instruction must be one of simple object lessons, but these should have an intimate relation to the child's surroundings, and should be made the pegs on which to hang many a tale. Probably the most satisfactory and practical mode of commencing is

to get children to draw up lists of familiar and common object under various heads, such as

Natural objects.

Things used in building construction.

Things from which household furniture is made, or which are in daily use.

Things used as clothing.

Food materials.

The children should be induced to describe these from observation as far as possible; to classify them according to their origin into mineral and animal and vegetable or organic; and occasion should be taken at this stage to give by means of reading lessons and demonstrations as much information as possible about the different things, their origin, how made, and their uses. It is obvious that in this way a great deal of geography and natural history (*Naturkunde*) might be taught in an attractive manner. Geikie's 'Science Primer on Physical Geography' is the type of book which may be worked through with great advantage at this stage.

#### STAGE II.—*Lessons in measurement.*

This stage should be entered upon as soon as children have learnt the simple rules of arithmetic, and are able to add, subtract, multiply and divide—and to use decimals.

Lineal measurements may be first made, using both an English foot-rule with the inch subdivided in various ways and a metric rule subdivided into millimetres. In this way the relation of the two scales is soon insensibly learnt.

Measurements of rectangular figures and the calculation of their areas may then be made.

After this the use of the balance may be taught, and the relation between the English and French systems may be learnt by weighing the same objects with the two kinds of weights. Use may then be made of the balance in determining the areas of irregular figures by cutting out rectangular and irregular figures from the same cardboard or thin sheet metal, and weighing these, &c.

Solid figures are next studied; a number of cubes made from the same wood having been measured, their volumes are then calculated, and the results thus obtained are compared with those which are obtained on weighing the cubes. The dimensions and weights of cubes made from different woods or other materials are then ascer-



tained, and thus it is observed that different materials differ in *density*. The study of the *relative density* of things generally is then entered upon. The ordinary method is easily learnt and used by children, a suitable bottle being provided by filing a nick down the stopper of a common two-ounce narrow mouth bottle; it may then be shown that the same results are obtained by the hydrostatic method of weighing in air and water, and it is not difficult to lead children to understand this latter method after they have determined the heights of balancing columns of liquids such as turpentine, water and saturated brine, of which they have previously ascertained the relative density. These hydrostatic experiments are of value at a later stage in considering the effects of atmospheric pressure.

By determining the dimensions of a cube and the weight of the water which it will displace, an opportunity is afforded to point out that if the results are expressed in cubic centimetres and grams respectively, there is a practical agreement between the numbers, and hence, to explain the origin of the metric system of weights and the relationship between its measures and weights; the irrationality of the English system may then be explained. •

The relative densities of a large number of common substances having been ascertained, the results may be tabulated and then the value of the data as criteria may be insisted on; as an illustration of their value, quartz, flint, sand and gravel pebbles may be selected. The children having determined their relative densities, the agreement between the results may be pointed out and the identity of the material explained. By drawing perpendiculars corresponding in height to the densities of various substances, a graphic representation is obtained, which serves to bring out the value of the graphic method of representation.

A very valuable exercise to introduce at this stage is based on the well-known fact that in certain conditions of the atmosphere things appear moist; a muslin bag full of seaweed may be hung up under cover but freely exposed, and may then be weighed daily at a given time; simultaneously the state of the weather, direction of the wind, the height of the barometer, and the state of the wet and dry bulb thermometer may be noted; on tabulating the results, and especially if the graphic method be employed, the variations and their relationship will be noticeable.

The thermometer, having thus become a familiar instrument, may be used to examine melting ice and boiling water; the construction

of both the Centigrade and Fahrenheit thermometers may then be explained, and the effect of heat on bodies made clear. The density of ice and of water at various temperatures may then be determined, a Sprengel tube—which is easily made—being used for warm water; the bursting of pipes in winter, the formation of ice on the surface of water, &c., may then be explained. Afterwards simple determinations of the heat capacity of a few metals, &c., and of the latent heat of water and steam, may be made in accordance with the directions given in a book such as Worthington's 'Practical Physics.'

STAGE III.—*Studies of the effect of heat on things in general; of their behaviour when burnt.*

As it is a matter of common observation that heat alters most things, the effect of heat on things in general should be studied; in the first instance qualitatively, but subsequently, and as early as possible, quantitatively. Bits of the common metals may be heated in the bowl of an ordinary clay pipe plunged into a clear place in any ordinary fire, or in such a pipe or a small iron spoon over a gas flame. The difference in fusibility is at once apparent, and in the case of metals like iron and copper, it is noticeable that although fusion does not take place, a superficial change is produced; the gradual formation of a skin on the surface of fused lead and tin is also easily perceived. Observations like this become of great importance at a later stage, and indeed serve to suggest further experiments; this is a point of special importance, and from the beginning of this stage great attention should be paid to inculcating habits of correct observation; the effect should first be recorded by the pupil, the notes should then be discussed and their incompleteness pointed out, and they should afterwards be re-written. The fusibility of substances which are not affected when heated in the tobacco pipe may be tested by heating them with a Fletcher gas blowpipe on charcoal, and by heating little bits of wire or foil in such a flame it is easy for children to discover the changes which metals undergo when burnt, especially in cases such as that of zinc or copper or iron.

The further study of the effect of heat should be quantitative, and may well commence with water. It being observed that water disappears on heating, water may be put into a clock glass or glass dish placed on a water bath (small saucepan); it evaporates and it is then observed that something is left. A known quantity of water by

weight or volume is therefore evaporated and the residue weighed. This leads to the discovery that water contains something in solution. The question then naturally arises, What about the water that escapes? So the steam is condensed and the distilled water evaporated. The conception of pure water is thus acquired. An experiment or two on dissolution—using salt and sugar—may then be introduced, a water oven or even an air oven (a small Fletcher oven) kept at a known temperature being used, and the residue dried until the weight is constant. Rain and sea-water may next be examined; the results afford an opportunity of explaining the origin of rain and of accounting for the presence of such a large quantity of dissolved matter in sea-water. Then the various common food materials may be systematically studied, commencing with milk; they should first be dried in the oven, then carbonized and the amount of char determined, then burnt and the percentage of ashes determined. A small platinum dish, 15 to 20 grams in weight, is required for these experiments, and a gas muffle furnace is of the greatest use in burning the char and in oxidising metals. In addition to the discipline afforded by such experiments a large amount of valuable information is acquired, and the all important fact is established that food materials generally are combustible substances. Afterwards mineral substances are examined in a similar manner, such as sand, clay, chalk, sulphur, &c., and then metals such as lead, copper, tin and iron may be studied; their increase in weight is in striking contrast to the inalterability of substances like sand and salt, and the destruction of vegetable and animal substances. Chalk, from which lime is made by burning, is found to occupy a middle position, losing somewhat in weight when strongly heated. The exceptional behaviour of coal among mineral substances, and of salt among food materials is shown to be capable of explanation inasmuch as coal is in reality a vegetable and salt a mineral substance; but sulphur remains an instance of exceptional behaviour requiring explanation. It is not exceptional in being combustible, as metals like magnesium and zinc are combustible, but in affording no visible product. The smell of burning sulphur, however, serves to suggest that perhaps after all there is a something formed which is an invisible substance possessed of an odour, and then follows quite naturally the suggestion that perhaps in other cases where no visible or perceptible product is obtained—as on burning charcoal, for instance—there may nevertheless be a product. Whereas, therefore, in Stage I. the pupil

will have learnt to appreciate the existence of a great variety of substances, and will have gained the power of describing their outward appearance more or less fully; and in Stage II. having learnt how to measure and weigh, will acquire the habit of determining by measurement certain properties of substances, and will thus be in a position to express in exact terms the kind of differences observed; in Stage III. the pupil will be led to see that profound changes take place on burning substances, and that these changes involve something more than the destruction of the things burnt. The foundation is thus laid for the study of change, *i. e.*, chemical studies proper.

STAGE IV.—*The problem stage.*

Many of the changes observed in the course of the experiments made in Stage III. might be examined and their nature determined, but the best to take first is a very familiar case, that of the rusting of iron.

PROBLEM I. *To determine what happens when iron rusts.*—The pupil *must* be led in the first instance to realize that a problem is to be solved and that the detective's method must be adopted and a *clue* sought for. It is a familiar observation that iron rusts, especially when wet; what happens to the iron, why does it rust, is the iron alone concerned in the change? No information can be gained by looking at it—perhaps the balance which has brought to light so much in Stage III. may be of service, so the iron is allowed to rust in such a manner that any change in weight can be observed. A few grams of iron-filings or borings are put on to a weighed saucer or clock glass along with a bit of stiff brass or copper wire to be used as a stirrer; the iron is weighed, then moistened and exposed under a paper cover to keep off dust, preferably in a warm place; it is kept moist and occasionally stirred. After a few days it is dried in the oven and then weighed. The weight is greater. *Something from somewhere has been added to the iron.* Thus the clue is gained. Where did this something come from? The fact that when a tumbler, for instance, is plunged mouth downwards into water the water does not enter, and that on gradually tilting the tumbler to one side something escapes—viz. air—at once affords a demonstration of the presence of air in the space around us. The iron rusted in this air, but was kept moist, so it may have taken up the something from either the air or the water. To ascertain whether the air takes part in the rusting, some iron borings are tied up in a bit of muslin and the bag is hung



from a wire stand placed in a jar full of water and a so-called empty (pickle) bottle, which in reality is full of air, is inverted over the iron; in the course of a few hours, as the iron rusts, the water is observed to rise until it occupies about one-fifth of the bottle (determined by measuring or weighing the water); the something added to the iron during rusting appears therefore to come from the air, and the all important fact is thus discovered that the rusting is a change in which not the iron alone, but also the air, is concerned. The experiment is several times repeated, fresh iron being used with the same air and the same iron put in succession into fresh portions air, but of the same result is always obtained: whence it follows that whatever it is in the air which takes part in the rusting, the air as a whole is not active. The changes previously observed to take place when iron, copper, lead, zinc, &c., were heated in air, are then recalled; as the metals were found to increase in weight it would appear probable that in these cases of change also the air was concerned.

These results at once suggest the question, What is air? So much having been learnt by studying the change which iron undergoes in rusting, other changes which happen in air therefore are next studied.

PROBLEM II. *To determine the nature of the changes which take place on burning substances in air.*—The use of phosphorus is introduced by reference to a match. Phosphorus is then burnt under a bell jar over water and the result noted: the disappearance of some of the air again shows that the air is concerned. The fact that phosphorus smokes when taken out of the water in which it is always kept suggests that some change is going on, so a stick of phosphorus is exposed in air as in the previous experiment with iron: soon one-fifth has disappeared and the phosphorous then ceases to smoke. The *quantitative* similarity of the two results suggests that iron and phosphorus behave alike towards air and *vice versa*, and serves to confirm the idea that some constituent of the air present only to the extent of about one-fifth is *activé*. But nothing is to be taken for granted, so iron is exposed in the phosphorus-air residue and phosphorus in the iron-air residue: as no change occurs there is no room left for doubt. Recalling the experiments in which various metals were burnt in air in order to determine whether in these cases the same constituent of the air was concerned in the change, air from which the active constituent has been removed by means of iron is passed through a heated tube containing bits of the metals: no

change is observed, so it is evident that as a rule, if not always, one and the same constituent of air is concerned. The experiments with iron and phosphorus, although they show that the air is concerned in the changes which are observed to take place, do not afford any information whether or no the water which is also present is concerned in the change. Phosphorus is therefore burnt in a 'Florence' flask closed with a rubber stopper: on removing the stopper under water some water enters, and by measuring this and the amount of water which will fill the flask the same result is obtained as in the previous cases. To be certain whether in this case anything enters or escapes from the flask it is weighed before and after the phosphorus is burnt. There is no change in weight. But does nothing escape? Yes, much heat; when it follows that heat is not material: that, although some of the air disappears, it is merely because it has become affixed to or absorbed by something else. This has been proved in the case of the rusting iron and the burnt metals. To obtain indisputable evidence in the case of the phosphorus this is burnt in a current of air in a tube loosely filled with asbestos to retain the smoke: the weight is found to increase. The observation that the phosphorus ceases to burn after a time suggests the introduction of a burning taper into the residue left by iron, &c.; it is found to be extinguished. Then a candle and subsequently a gas flame may be burnt in a bell jar full of air over water. Reversed combustion may then be demonstrated in order to fully illustrate the reciprocal character of the phenomena. Thus it is ascertained that all ordinary cases of combustion are changes in which the air, and not the air as a whole but a particular constituent, is concerned, and no doubt remains that the same constituent is always active, but active under different conditions; it is realized also that the production of heat is the consequence of the union of the substance burnt with the active substance in air. The experiment of exposing phosphorus in air affords the opportunity of demonstrating the evolution of heat even in a case where no visible combustion occurs, as the phosphorus is always observed to melt. At this stage careful note should be taken of the appearance of the different products of combustion and of a change such as that which occurs when the product from phosphorus is exposed to the air.

PROBLEM III. *To separate the active from the inactive constituent of air.*—It now has become of importance to get this active constituent of the air by itself, and the question arises whether it cannot be sep-

arated from one of the metals or other substances with which it has been found to combine. The pupil is therefore told to collect information about the different subjects formed by burning metals, &c. —whether they can be obtained in sufficient quantity to work with, &c. Iron rust and iron scale are easily obtainable, and so is copper scale; zinc is burnt to produce zinc white which is used as paint; lead is also burnt on a large scale, and in this case it appears that one or other of two substances is formed—litharge at a high temperature, red lead at a low temperature. This peculiarity of lead suggests the study of the two products in the hope of discovering the clue to a method. Weighed quantities of the litharge and red lead are heated; it is observed that only the latter changes in appearance and that it loses weight. But what does it lose? It was formed by merely roasting lead in the air and the something which it loses must therefore have been derived from the air. If the red lead is heated in a tube a gas is given off which is collected and tested—how? with a taper or glowing splinter as it is to be supposed that the gas will support combustion if, as is to be expected, it is the active constituent of air. The *discovery* of the active constituent of air is thus made! If air consists of this gas and that which remains after exposing phosphorus or iron in air, then by adding to such residual air as much of the gas from red lead as was withdrawn, air should be re-obtained; this is found to be the case. The names of the two gases are now *for the first time* stated, and an easy method of preparing oxygen is demonstrated, such as that of heating a chlorate, but without any explanation. The conclusion previously arrived at that probably in all the cases previously studied of changes occurring in air the oxygen is the active substance, may now be verified by burning or heating in oxygen the substances which had been burnt in air. The comparison of the densities of the two gases with that of air should then be made.

PROBLEM IV. *To determine what happens when chalk is burnt to lime.* —The discovery of the *composition* of the air in the course of experiments made with the object of determining the nature of certain changes naturally suggests that the attempt should be made to ascertain the composition of other things by studying the changes which they undergo. Chalk is known to give lime when burnt, and experiments made in Stage III. have indicated that chalk loses something when burnt—the idea that an invisible something is given off is especially probable after the experiments with red lead have been



made; so it is decided to heat chalk strongly, but before doing this, chalk and lime are examined comparatively. Chalk is observed not to be altered by water; on shaking it with distilled water and evaporating some of the filtered liquid in a weighed dish, very little residue is obtained—so it is established that it is but very slightly soluble in water. Lime is slaked, weighed quantities of lime and water being used; the retention of a considerable amount of water, even after exposing the slaked lime in the drying oven, shows that the slaking involves a definite change in composition—that slaked lime is lime and water. The solubility of the lime is next determined and found to be considerably greater than that of the chalk. It is found that chalk is but very slightly altered in weight when heated over a gas flame, and that it is only when it is strongly heated that it is converted into lime; so the chalk is strongly heated in an iron tube in a Fletcher blowpipe furnace, when gas is freely given off, and subsequently it is found that the chalk has become lime. The gas is tested with a taper, which it extinguishes, so it cannot be oxygen, but may be nitrogen; its density is therefore compared with that of nitrogen and found to be greater, so evidently it is a peculiar gas, and may be called chalk gas. If chalk consists of this gas and lime, it should be possible to reproduce chalk from them; so the gas is passed through a small weighed tube containing lime, and the tube is found to get heavier. But lime and chalk are so much alike that it is difficult to say that chalk is formed; perhaps dissolved lime will act similarly; the gas is therefore passed into or shaken up with lime water. The precipitate which forms looks like chalk and probably is, but this remains to be decided. The discovery of this behaviour of chalk gas is important as affording a means of again comparing the gas from chalk with nitrogen. In working with lime water it is scarcely possible to avoid noticing that a film forms on its surface; by exposing a quantity of the lime water a considerable amount of the precipitate is obtained; its resemblance to chalk is noted, and the possible presence of chalk gas in air is thereby suggested; this and the precipitates previously obtained are collected, dried, and then introduced into pieces of narrow hard glass tubing, connected to wash-bottles containing lime water, and on heating strongly by means of a blow-pipe flame, while air is sucked through to carry forward any gas into the lime water, the white precipitates are again obtained, so no doubt remains that the original precipitates were chalk.



Incidentally the discovery is thus made that air contains something besides oxygen and nitrogen, viz.: chalk gas.

It being thus established that chalk consists of two things, lime and chalk gas, at this stage it is pointed out how firmly these two constituents hold to each other in the chalk. The absorption of the gas by the lime—its entire disappearance in fact—is commented on. Accurate determinations of the loss of weight on heating crystallised chalk (*calc spar*) should at this stage be carried out before the class, if not by the pupils, so that the numbers may be quoted and that it may become impressed on them that the proportions in which the lime and chalk gas are present is constant. Their attention may be recalled to the oxides previously studied, it being pointed out that on inspection these afford no indication that they contain oxygen; that here again the gas entirely loses its individuality on entering into union or combination. That oxides contain their constituents in fixed proportions may be demonstrated experimentally by oxidising finely divided copper and determining the increase in weight, lime being used as drying agent. In this way the characteristics of *compounds* are elucidated. Then the comparison may be made with air and the fact made clear that it behaves as a mere mixture. Still no reference should be made to elements.

PROBLEM V. *To determine what happens when organic substances are burnt.*—The experiments thus far made have shown that phosphorus and a number of metals burn in the air because they combine with the oxygen, forming oxides, heat being given out as a *consequence*; but that chalk when burnt is split up or decomposed into lime and chalk gas, this result being a consequence of the heating alone, the air having nothing to do with it. It remains to ascertain what happens when organic substances are burnt as these give no visible product beyond a little ashes. As in all cases when vegetable or animal substances are burnt a certain amount of 'char' is obtained, which then gradually burns away charcoal or coke is first studied. It having been discovered that the oxygen in air is the active cause of burning in many cases, it appears probable that the air is concerned in the burning of charcoal, coal, &c. As when once set fire to, these continue to burn, the charcoal is at once heated in oxygen: it burns, but no visible product is formed; it therefore follows that if the charcoal is oxidised the oxide must be an invisible gas. How is this to be tested for? What gases are already known to the pupil? How are these distinguished? Oxygen is excluded.

Is it perhaps nitrogen, and is not perhaps the nitrogen in air merely used-up oxygen as it were, produced by the burning of organic substances? Or is it perhaps that gas which was found in the air along with oxygen and nitrogen, and which turned lime water turbid? This last being an easy test to apply is at once tried; the lime water is rendered turbid, and so to leave no doubt, a sufficient amount of the gas is prepared and passed into lime water, and the precipitate is collected: it is found to give off chalk gas when heated, and when the loss it suffers on heating is determined it is found to agree with that suffered by the precipitate prepared from chalk gas. Thus the discovery is made that chalk gas is an oxide of carbon, and that chalk consists of at least three things.

It may be objected that to make the experiment in this manner takes too much time; but to this it may be answered that such experiments are precisely similar to those made in actual practice, and that they exercise a most important influence in teaching the pupils to take nothing for granted, never to jump at conclusions, and to rest satisfied if they progress surely, however slow the advance may be.

The char from a number of organic substances may now be burnt in oxygen, and the gas passed into lime water; chalk gas is found in every case to be a product, and hence the presence of a common constituent—carbon—in all is established. In burning substances such as sugar, it is scarcely possible to avoid noticing the formation of a liquid product, so it is evident that chalk gas is not the only product of their combustion, or carbon their only constituent.

Food materials generally having been found to contain 'carbon,' as they are obviously in some way destroyed within the body, and it is known that air is necessary for life, the question arises, what becomes of food, and why is air necessary for life? Is the food, perhaps, in large part 'burnt up' within the body, thus accounting for the fact that our bodies are always warm? The characteristic product of combustion of carbonaceous substances is therefore tested for by breathing into lime water. The discovery thus made affords an opportunity for a digression and for explaining how plants derive their carbon from the air.

PROBLEM VI. *To determine what happens when sulphur is burnt.*—From the results of the experiments with carbon, it appears probable that the disappearance of sulphur when burnt is also really due to

its conversion into a gaseous oxide, so it is kindled and introduced into oxygen: if it be burnt over water in a bell jar in a spoon passing through the stopper (a rubber cork), the water is seen to rise; if, on the other hand, it be burnt in a dry flask closed by a rubber cork carrying a gauge-tube, as suggested by Hofmann,\* the volume is seen to be almost unchanged after combustion. It follows, therefore, that the sulphur and oxygen unite and form a soluble product. Sulphur is next burnt in a tube in a current of oxygen, and the gas is passed into water; a solution is thus obtained having the odour of the gas and sour (acid) to the taste. The fact that carbon and sulphur—both non-metals—behave alike in yielding gaseous oxides suggests that a comparison be made of their oxides: so the acid solution is added to lime water; a precipitate is formed which redissolves on adding more of the sulphur gas solution; on the other hand, on adding the lime water to the acid liquid, this latter after a time loses its characteristic smell. There can be no doubt, therefore, that the sulphur gas does in some way act upon the lime. The discovery that the addition of more of the sulphur oxide leads to the dissolution of the precipitate which it first forms in lime-water suggests trying the effect of excess of the carbon oxide on the lime-water precipitate; this is done, and the discovery is made that the precipitate gradually dissolves. The solubility of the new substance may then be determined by passing the gas into water containing chalk in suspension, filtering, and evaporating. This leads to the observation that a precipitate is formed on heating the liquid, and this is soon found to be chalk. An opportunity is thus afforded of explaining the presence of so much 'chalk' in water; of demonstrating its removal by boiling and by lime water; and the effect it has on soap.

The observation that the oxides of both carbon and sulphur combine with lime suggests trying whether the one will turn out the other, so the solution of the sulphur oxide is poured on to chalk: effervescence is observed, and on passing the gas into lime water a precipitate is obtained. The production of this effect by the *acid* solution suggests trying common vinegar—a well-known *acid* substance. This also is found to liberate chalk gas, and the discovery

\* By burning carbon also in this way a most effective demonstration is given of the fact that no loss or gain of matter attends the change, and that only heat escapes; the results in the case of carbon and sulphur are particularly striking, as the products are gaseous and invisible.

of an easy method of preparing chalk gas is thus made. The oxide formed on burning phosphorus, having previously been found to give an acid solution, is tried, and it is found that it also liberates chalk gas. As a good deal of vinegar is found to give very little chalk gas, the question arises, are there not acids to be bought which will have the same effect and are stronger and cheaper? On inquiry it is found that sulphuric acid or oil of vitriol, muriatic acid or spirits of salts, and nitric acid or aquafortis may be bought, and that these all act on chalk. The behaviour of chalk with acids affords a means of testing the lime water precipitate obtained in working out Problems IV. and V. In this manner the pupil is led to realize that certain agents may very readily produce effects which are only with difficulty produced by heating—that the *chemical agent* may produce very powerful effects. The ready expulsion of the carbon oxide of the chalk suggests that other substances not yet studied, such as the metals, when treated with acids may behave in a special manner which will afford information as to their nature. At this point, prior to making the experiments with the acids, an explanation may be given of the names *oil of vitriol*, *spirits of salts* and *aquafortis*; the processes by which they are made may be described and illustrated, without, however, any attempt being made to explain them from the chemical point of view. The sulphuric acid should be made from green vitriol, and its behaviour on dilution should be demonstrated as well as its use as a drying agent.

PROBLEM VII. *To determine what happens when metals are dissolved in acids.*—Iron, zinc, lead, tin, copper and silver may be taken. On pouring diluted oil of vitriol on to iron or zinc, the metal dissolves with effervescence; the gas is collected, and when tested is found to burn. Thus a new gas is discovered, differing from all which have previously been studied, inasmuch as it is combustible; in order not to interrupt the study of the action of acids on metals, however, its further examination is postponed for a while. Resuming the experiments with metals, lead, tin, copper and silver are found not to be acted upon by diluted oil of vitriol.

Muriatic acid, in like manner, dissolves iron and zinc and also tin with effervescence, and the gas which is given off in each case exhibits the same behaviour as that obtained from iron or zinc and diluted oil of vitriol. Lead, copper and silver are not appreciably affected.



Aquafortis is found to dissolve not only iron and zinc but also copper, lead and silver, and to convert tin into a white substance. The gas which is given off as the metal dissolves is observed to be coloured; when it is collected over water, however, it is seen to be colourless, and to become coloured on coming into contact with air—oxygen and nitrogen are, therefore, added to portions of the gas over water. In this manner, not only is a new gas discovered, but also a test for oxygen; and opportunity is afforded of here calling attention to the fact that air behaves exactly as oxygen, that the oxygen in air appears to be unaffected by its association with nitrogen—that, in fact, it is uncombined. From these experiments it is obvious that metals and acids interact in a variety of ways. Finally, the dissolution of gold and platinum by aqua regia may be demonstrated.

PROBLEM VIII. *To determine what happens when oxides are acted on by acids.*—In the course of the previous experiments a number of oxides have been prepared by burning various metals in air; these are found to be unchanged by water. The discovery that acids act on metals suggests a trial of the effect which acids will have on their oxides; so the oxides of zinc, iron, copper and lead are submitted to the action of the three acids previously used. Sulphuric acid is found to dissolve zinc oxide, iron rust and copper oxide, but no gas is evolved; excess of the oxide may be used, and the filtered liquid concentrated; the crystals which separate may be examined and compared with those obtained by dissolving the metal in sulphuric acid, &c. Litharge apparently is not changed by sulphuric acid, but red lead is, although not dissolved. Muriatic acid being used, all the oxides are found to dissolve, and in the case of red lead a greenish yellow gas is given off possessing a most disagreeable smell; this is noted as a case for study. The product from the lead oxides is observed to crystallise out from the hot liquid on standing, so the undissolved original product is boiled up with water, and the solution is filtered, &c. Attention is thus directed to the difference in solubility of the products. Next, aquafortis is used; again all are dissolved, except the red lead, which, however, is obviously altered. In the case of the lead oxides the product is again less soluble than those afforded by the other oxides, but more soluble than the product obtained on using muriatic acid. The pupil has already been led to realize that of two substances capable of acting on a third, such as chalk gas and sulphur gas, which both combine with lime,

one may be the stronger, and may turn out the other, sulphur gas turning out chalk gas from chalk. A comparison of the three acids with the object of ascertaining which is the strongest is therefore suggested—the metal or oxide is dissolved in one of the acids, and the others are then added. No positive result is obtained in the case of zinc, iron or copper, but the solution of lead in nitric acid is precipitated by muriatic and sulphuric acid; the former precipitate is found to dissolve in boiling water and to crystallise out in exactly the same way as the substance obtained from lead oxide and muriatic acid. The sulphuric acid product is found to be almost insoluble in water, and also in muriatic and nitric acids; these observations make it possible, by examining the behavior towards muriatic and nitric acids of the products of the action of sulphuric acid on the lead oxides, to establish the fact that the product is the same whether lead be dissolved in nitric acid and sulphuric acid be then added, or whether either of the oxides be treated with sulphuric acid. It is further evident that those acids which give difficultly soluble or insoluble products act with difficulty if at all on the metal. Other metals besides those mentioned may be now studied, and, a solvent being found, the acids which do not dissolve the metal may be added to the solution. In this way, for example, the chloride test for silver is discovered.

In experimenting with acids the pupils can hardly fail to stain their clothes and their fingers. The observation that acids alter colours serves to suggest experiments on the action of acids on colours, especially those of leaves and flowers. The use of litmus, methylo-range, cochineal, &c., may then be explained. As various oxides have been found to 'neutralize' acids, the study of their effect on the colours altered by acids is suggested. Lastly, a few experiments with vegetable and animal substances, sugar, &c., may be made, which demonstrate the corrosive action of oil of vitriol and aquafortis.

PROBLEM IX. *To determine what happens when the gas obtained by dissolving iron or zinc in sulphuric or muriatic acid is burnt.*—The gas has been observed to burn with a smokeless, odourless flame. To ascertain whether, as in all other cases of combustion previously studied, the oxygen of the air is concerned in the combustion, a burning jet of the gas is plunged into a dry cylinder full of oxygen, in which it is not only seen to continue burning, but it is also noticed that drops of liquid condense on the cylinder above the flame; this immediately suggests that the product is a liquid. The jet is found to

be extinguished in nitrogen, so evidently when the gas burns it forms an oxide. The experiment is repeated, and the gas burnt in a bell jar full of oxygen over water; the water rises as the combustion proceeds, proving that the oxygen is used up. To collect a sufficient quantity of the product for examination, the dried\* gas is burnt at a jet underneath a Florence flask through which a stream of cold water is allowed to circulate; the neck of the flask is passed through the neck of a bell jar and the flask and bell jar are clamped up in an inclined position, so that the liquid which condenses may drop into a small beaker placed below the rim of the jar. What is the liquid? It looks very much like water, and is without taste or smell. Is it water? How is this to be ascertained? What are the properties of water? The knowledge previously gained here becomes of importance. It has been observed that frozen water melts at  $0^{\circ}$  Centigrade, that water boils at  $100^{\circ}$ , and that one cubic centimetre weighs one gramme at  $4^{\circ}$  C.; so the liquid is frozen by the ice-maker's mixture of ice and salt, a thermometer being plunged into it so that the solid ice forms on the bulb; the melting-point is then observed. Subsequently the boiling-point is determined, a little cotton-wool being wrapped around the bulb of the thermometer. Lastly, the density of the liquid may be determined. It is thus established that the gas yields water when burnt, and the name of the gas may now *for the first time* be mentioned and explained. The results thus obtained leave little doubt that water is an oxide of hydrogen; but in order to place this beyond doubt it is necessary to exclude nitrogen altogether. How is this to be done? Red lead is known to consist of lead and hydrogen only, and readily parts with a portion at least of its oxygen; so dried hydrogen is passed over red lead, which is then gently heated. Again a liquid is obtained which behaves as water, so there can be no doubt that water is an oxide of hydrogen. Water is not obtained on merely mixing oxygen and hydrogen; it is only produced when combustion takes place. To start the combustion a flame is applied to a small quantity of a mixture of the two gases: a violent explosion takes place. An opportunity is here again afforded of calling attention to the entire change in properties which takes place when the compound is formed. On heating red lead in hydrogen, lead is obtained, although on

\* The importance of drying the gas is realized without difficulty, as previous observations have shown that the air is moist, and as the gas is given off in presence of water; lime may be used.



heating it alone it loses only a portion of its oxygen, and the 'reduction' takes place very readily; evidently, therefore, hydrogen is a powerful agent. This observation suggests further experiments. Will it not be possible to remove oxygen by means of hydrogen from other oxides which are not altered on heating? and will not other combustible substances besides hydrogen remove oxygen from oxides?

PROBLEM X. *To determine what happens when hydrogen and other combustible substances are heated with oxides.*—Zinc oxide, iron rust and copper oxide are now heated in a current of hydrogen; the first remains unaltered, the other two are seen to change, a liquid being formed which it cannot be doubted is water; the copper oxide evidently becomes reduced to copper. Is the iron rust similarly reduced to the metallic state? How is iron to be tested for? Iron is attracted by the magnet and dissolves in diluted oil of vitriol with evolution of hydrogen. Applying these tests, no doubt remains that the iron rust is deprived of its oxygen.

Litharge and copper oxide may then be mixed with soot or finely powdered charcoal and heated in tubes; gas is given off which renders lime water turbid, and metallic lead or copper is obviously obtained. It is thus established that some but not all oxides may be deprived of their oxygen by means either of hydrogen or carbon. Opportunity is here afforded of explaining the manufacture of iron.

Several dried combustible organic substances, sugar, bread and meat, may now be burnt with copper oxide in a tube, the fore part of which is clean and is kept cool; liquid is seen to condense, while 'chalk gas' is given off; the liquid has the appearance of water, and sufficient may easily be obtained to ascertain whether it is water. The presence of hydrogen in organic substances is thus discovered; its origin from water may now be explained, and the double function of water in the plant and animal economy may be referred to—viz. that it both enters into the composition of the animal and plant structure and also acts as a solvent. The combustion of ordinary coal gas, of alcohol, of petroleum, of oil and of candles, may then be studied, and the presence of hydrogen in all of these noted.

PROBLEM XI. *To determine whether oxides such as water and chalk gas may be deprived of oxygen by means of metals.*—It being found that hydrogen and carbon withdraw the oxygen from some but not from all metallic oxides, it follows that some metals have a stronger, others a weaker, hold upon or 'affinity' to oxygen than has either



hydrogen or carbon; the question arises whether any and which metals have so much greater an affinity to oxygen that they will withdraw it from hydrogen and carbon. Copper and iron have been found to part with oxygen, but zinc and magnesium did not, so these four metals may be studied comparatively. Steam is passed through a red-hot copper tube full of copper tacks; no change is observed. The experiment is repeated with an iron tube charged with bright iron nails: a gas is obtained, which is soon recognized to be hydrogen, and on emptying out the nails they are found to be coated with black scale. Zinc and then magnesium are tried, and, like iron, are found to liberate hydrogen. Chalk gas is next passed over red-hot copper, and is found to remain unchanged, but on passing it over red-hot iron or zinc a gas is obtained which burns with a clear blue smokeless flame; this gas is not absorbed by milk of lime, but on combustion yields chalk gas, so it evidently contains carbon, and is a new combustible gas. Like hydrogen, it is found to afford an explosive mixture with oxygen. Finally, magnesium is heated in chalk gas; it is observed to burn, and the magnesium to become converted into a blackish substance unlike the white oxide formed on burning it in air. But it is to be expected that this oxide is produced, and to remove it, as it is known from previous experiments to be soluble in muriatic acid, this acid is added: a black residue is obtained. What is this? Is it not probable that it is carbon? If so, it will burn in oxygen yielding chalk gas. So the experiment is made. These experiments in which hydrogen is obtained from water, and carbon from chalk gas afford the most complete 'analytic' proof of the correctness of the conclusions previously arrived at regarding water and chalk gas, and which were based on 'synthetic' evidence; taken together, they illustrate very clearly the two methods by which chemists determine composition.

As hydrogen and carbon form oxides from which oxygen may be removed by means of some metals but not by all, the question arises, which has the greater hold upon or affinity to oxygen—carbon or hydrogen? As it is the easiest experiment to perform, steam is passed over red-hot charcoal; a combustible gas is obtained which yields water and chalk gas when burnt, so evidently the hydrogen is deprived of its oxygen, and this latter combines with the carbon, forming the combustible oxide of carbon. Will not carbon partly deprive chalk gas of its oxygen? The experiment is made and it is found that it will. These results afford an opportunity of calling

attention to and explaining the changes which go on in ordinary fires and in a furnace.

PROBLEM XII. *To determine the composition of salt gas, and the manner in which it acts on metals and oxides.*—It has previously been demonstrated that spirits of salt or muriatic acid is prepared by acting on salt with oil of vitriol and passing the gas which is given off into water; the solution has been found capable of dissolving various metals and oxides, chalk, lime, &c., and as water alone does not dissolve these substances, the effect is apparently attributable to the dissolved gas, so it becomes of interest to learn more of this gas in order that its action may be understood. It is first prepared; its extreme solubility in water is observed, and also the fact that as it dissolves, much heat is given out; and it is noted that although colourless and transparent it fumes in the air. How is its composition to be determined? Is there any clue which can be followed up? Reference is made to the previous observations, and it is noted that its solution dissolves various metals with evolution of hydrogen; water alone has no such effect. Is this hydrogen derived from the water or from the dissolved gas? The gas alone is passed over heated iron turnings, and the escaping gas is collected over water; it proves to be hydrogen, so evidently salt gas is a compound of hydrogen with something else. How is this something else to be separated from the hydrogen? Do not previous experiments suggest a method? Yes, they have proved that hydrogen has a marked affinity to oxygen, and now it is recollected that on treating muriatic acid with red lead—a substance rich in oxygen—a greenish-yellow gas is obtained. The experiment is repeated on a larger scale and the gas is examined. If it is contained together with hydrogen in salt gas, perhaps salt gas will be obtained on applying a flame to a mixture of the two gases just as water is from a mixture of oxygen and hydrogen; the mixture is made and fired, and the result leaves little doubt that salt gas does consist of hydrogen in combination with the greenish-yellow gas—chlorine. Whence is this chlorine derived—from the salt or the sulphuric acid?

The notes are again consulted, and it is seen that a solution of silver in nitric acid gave a characteristic precipitate with muriatic acid but not with sulphuric, so salt solution is added to the silver solution, and a precisely similar precipitate is obtained, leaving little doubt that the chlorine is derived from the salt. It is now easily realized that the iron and zinc displace the hydrogen of the dissolved

hydrogen chloride. What happens when the oxides are acted on? In addition to the metal they contain oxygen, which is known to combine readily with hydrogen, forming water; is water formed? Zinc oxide is therefore heated in hydrogen chloride; a liquid is obtained which behaves exactly as a solution of hydrogen chloride in water. When the action is complete, and all that is volatile has been driven off by heat, a solid remains very like fused common salt—doubtless zinc chloride, since it is to be supposed that as the hydrogen has taken the place of the zinc the chlorine has taken the place of the oxygen. What, then, is the action of hydrogen chloride on chalk? It evidently not only separates the chalk gas from the lime, but also dissolves this latter. What is formed? Dry (unslaked) lime is there heated in a current of hydrogen chloride. It behaves just as zinc oxide yielding a liquid product—evidently a solution of hydrogen chloride in water as it dissolves zinc with evolution of hydrogen, and the residue is like that of zinc chloride. The important discovery is thus made that lime also is an oxide—that chalk, in fact, is a compound of two oxides; the resemblance of lime to zinc oxide and magnesium oxide is so striking that the conclusion is almost self-evident that lime is probably a metallic oxide, and it may be here pointed out that this actually is the case. The gradual discovery of the composition of chalk in the manner indicated is an especially valuable illustration of chemical method, and serves to show how chemists are often obliged to pause in their discoveries and to await the discovery of new facts and methods of attack before they are able to completely solve many of the problems which are submitted to them. The solids obtained on dissolving zinc oxide and lime in muriatic acid and boiling down the solution, when all the water is driven off, are white solids like fused salt, but on exposure they gradually became liquid. In so doing they increase in weight, and evidently behave like sulphuric acid. Probably water is absorbed from the air: no change takes place when they are kept over sulphuric acid or dry lime. In this way two new desiccating agents are incidentally discovered.

PROBLEM XIII.—*To determine the composition of washing soda.*—The study of this substance is of importance as introducing the conception of an alkali. The preparation of washing soda from salt is first described. On heating the crystals they melt and give off 'steam'; the experiment is made in such a way that a quantity of the liquid is obtained sufficient to place beyond doubt that it is water.



The water is found to be easily driven off on heating the crystals in the oven, and to constitute a very large proportion of the weight of the crystals. The conception of water of crystallization is thus gained. On heating the dried substance to full redness in the platinum dish, no loss occurs. The residue dissolves in water, and 'soda crystals' may again be obtained from the solution, so that heat does not affect it. Perhaps acids which have been found to act so powerfully in other cases will afford some clue—on trial this is found to be the case: a colourless, odourless gas is given off, which extinguishes a burning taper. Is this perhaps nitrogen or chalk gas? The lime-water test at once decides that it is the latter. So it is determined that washing soda, like chalk, is a compound of chalk gas—but with what? With an oxide? The dried substance is heated in hydrogen chloride: chalk gas is given off as before, and a liquid which is soon recognized as water saturated with hydrogen chloride. The residue dissolves in water, and separates from the concentrated solution in crystals exactly like salt, and, in fact, is soon recognized to be salt; evidently, therefore, that which is present in salt along with chlorine is present in soda crystals along with oxygen, chalk gas and water. The preparation of the metal sodium from soda is then explained. Acquaintance being thus made with compounds of chalk gas with two different oxides, the question arises, which oxide has the greater affinity to the chalk gas? Will lime displace sodium oxide from soda or *vice versa*? On adding lime water to soda solution, a precipitate of chalk is formed. What does the solution contain? Lime water contains lime in combination with water; is the sodium oxide present in combination with water? Soda is boiled with milk of lime (in an iron saucepan to avoid breakage) until it no longer affects lime water; afterwards the liquid is poured off and boiled down. The product is very unlike soda: it is very caustic, and when exposed to the air becomes liquid. If it is an analogous substance to slaked lime, it should combine with chalk gas and be reconverted into soda; this is found to be the case. Caustic soda is thus discovered. Chalk and lime are known to neutralize acids; both soda and caustic soda are found to do so, and their effect on vegetable colours is found to be the reverse of that of acids. At this stage the origin of the name alkali is explained, and it is pointed out that the oxides which have been studied may be arranged in two groups of alkali-like or *alkylic* and acid-forming or *acidic* oxides, the former being derived from metals, the latter from non-metals. The produc-



tion of *salts* by the union of an oxide of the one class with the oxide of the other class is then illustrated by reference to earlier experiments.

The point is now reached at which the results thus far obtained may be reconsidered. The student has been led in many cases to make discoveries precisely in the manner in which they were originally made; and it is desirable that at that stage, if not earlier, the history of the discovery of the composition of air and water, etc., should be briefly recited. It is then pointed out that a variety of substances have been analyzed and resolved into simpler substances—air into oxygen and nitrogen, water into oxygen and hydrogen, etc.; and that these simpler substances thus far have resisted all attempts to further simplify them, and are hence regarded as elements. A list of the known elements having been given, the diverse properties of the elements may be illustrated from the knowledge gained in the course of the experiments. The fact, that when elements combine, compounds altogether different in properties from the constituents are formed, also meets with manifold illustration. Too little has been ascertained to admit of any general conclusion being arrived at with regard to the proportions in which elements combine, but it is clear that they may combine in more than one proportion since two oxides of carbon have been discovered, and in the only cases studied—viz. copper oxide and chalk—the composition has been found not to vary. The existence of various types of compounds has been recognized, and a good deal has been learnt with reference to the nature of chemical change. But, above all, the method of arriving at a knowledge of facts has been illustrated time after time in such a manner as to influence in a most important degree the habit of mind of the careful student. New facts have been discovered by the logical application of previously discovered facts: the habitual and logical use of facts has been inculcated. This is all-important. It has become so customary to teach the facts without teaching how they have been discovered that the great majority of chemical students never truly learn the use of facts; they consequently pursue their avocations in a perfunctory manner, and only in exceptional cases manifest those qualities which are required of the investigator; their enthusiasm is not awakened, and they have little desire or inclination to add to the stock of facts. It must not for one moment be supposed that the object of teaching chemistry in schools is to make chemists. Habits of regulated inquisitiveness,

such as must gradually be acquired by all who intelligently follow a course such as has been sketched out, are, however, of value in every walk of life; and certainly the desire to understand all that comes under observation should as far as possible be implanted in everyone.

STAGE V.—*The quantitative stage.*

The *quantitative* composition of many of the substances which have previously been studied qualitatively should now be determined—in some cases by the teacher in face of the pupils, so that every detail may be observed and all the results recorded; in other cases by the pupils.

The composition of water is first determined by Dumas' method; this may easily be done, and fairly accurate results may be obtained in the course of a couple of hours. The results obtained by Dumas and subsequent workers should then all be cited, and, attention having been drawn to the extent to which such experiments are necessarily subject to error, the evidence which the results afford that hydrogen and oxygen combine in certain *fixed and invariable proportions* to form water is especially insisted upon.

The composition of chalk gas is next determined; this also is easily done, as impure carbon (lampblack) may be burnt and the hydrogen allowed for. Again, attention is directed to the results obtained by skilled workers, and the evidence which they afford that chalk gas never varies in composition.

The composition of copper oxide has already been ascertained; it may be re-determined by reducing the oxide in hydrogen; in fact, in determining the composition of water.

The lead oxides may be reduced in a similar manner, the oxide obtained by igniting white lead as well as red lead and the brown oxide obtained by acting on red lead with nitric acid being used. In this way it is ascertained that the brown oxide is the highest oxide; the loss in weight which this oxide suffers when ignited may then be determined.

Tabulating the results thus obtained, after calculating with what amount of the particular element that quantity of oxygen is associated which in water is combined with one part by weight (*unit weight*), of hydrogen, numbers such as the following are obtained:

1 part of hydrogen is combined with 8 parts of oxygen in water						
3	„	carbon	„	8	„	„ chalk gas
31.5	„	copper	„	8	„	„ copper oxide
103.5	„	lead	„	8	„	„ lead oxide (litharge)
51.8	„	„	„	8	„	„ „ (brown).

These clearly illustrate the fact that elements combine in very different proportions, and the results obtained with the lead oxides afford also an illustration of combination in multiple proportion.

The amounts of silver and lead nitrates formed on dissolving silver and lead in nitric acid are next determined by evaporating the solutions of known weights of the metals in porcelain crucibles on the water-bath, and then drying until the weight is constant; accurate results may be easily obtained, and these two exercises afford most valuable training. The nitrates are subsequently evaporated with muriatic acid and the weights of the products determined. What are these products? Does the metal simply take the place of the hydrogen in hydrogen chloride as zinc does when it dissolves in muriatic acid? If so, the products are silver and lead chlorides, and it may be expected that the same substances will be obtained—that the same increase in weight will be observed, when, say, silver is combined directly with chlorine as when it is dissolved in nitric acid and the solution is precipitated with muriatic acid or salt. Silver is, therefore, heated in chlorine, and is found to increase in weight to the same extent as when it is dissolved in nitric acid, &c.; a given weight of silver precipitated by salt is also found to increase to the same extent as when it is directly combined with chlorine. The composition of silver chloride having thus been ascertained, the amount of chlorine in salt is determined. The composition of salt being ascertained, purified dried washing soda is converted into salt, and also the amount of chalk gas which it contains is determined: from the data, the composition of sodium oxide may be calculated. In like manner the composition of lime may be ascertained by converting chalk into chloride by igniting it in hydrogen chloride, and then determining the chlorine in the chloride; the same method may be applied to the determination of the composition of the oxides and chlorides of zinc, magnesium, and copper.

Discussing these various results, and comparing the quantities of oxygen and of chlorine which combine with any one of the metals examined, it is seen that in every case about 35.4 parts of chlorine takes the place of eight parts of oxygen. Combination in *reciprocal*

*proportions* is thus illustrated, and by considering the composition of chalk and washing soda it may be shown that this applies equally to compounds of two and to compounds of three elements. As 35.4 parts of chlorine is found in every case to correspond to eight parts of oxygen it is to be expected that hydrogen chloride contains one part of hydrogen in combination with 35.4 parts of chlorine; a solution containing a known weight of hydrogen chloride is, therefore, prepared by passing the gas into a tared flask containing water and the chlorine is then determined.

It being thus clearly established what are *equivalent* weights of elements, the conception of equivalents may be further developed by exercises in acidimetry carried out by the pupils themselves. The proportions in which washing soda and hydrogen chloride interact may be determined by mixing solutions of known strength until neutralisation is effected; if the solution be evaporated and the chloride weighed, the results may be used in calculating the composition of hydrogen chloride; they serve, in fact, as a check on the conclusions previously arrived at as to the composition of washing soda and hydrogen chloride. Solutions of sulphuric and nitric acids may be similarly neutralised, and, the amounts of sulphate and nitrate formed having been ascertained, the equivalents of the acids may be calculated on the assumption that the action is of the same kind as takes place in the case of hydrogen chloride. Determinations of the strengths of acids &c., may then be made. In a similar manner the volumetric estimation of silver may be taught and the percentage of silver in coinage and other alloys determined.

Such a series of quantitative exercises as the foregoing, when carried out *before* and to a considerable extent *by* the pupils, undoubtedly affords mental discipline of the very highest order, and is effective of good in so many ways that the value of such teaching cannot be over estimated. The failure to grasp quantitative relationships which examiners have so frequently to deplore is without question largely, if not alone, due to students' entire ignorance of the manner in which such relationships have been determined. Moreover, the appreciation by the general public of the principles on which quantitative analysis is founded would certainly be directly productive of good in a multiplicity of cases.



STAGE VI.—*Studies of the physical properties of gases in comparison with those of liquids and solids. The molecular and atomic theories and their application.*

A series of quantitative experiments on the effect of heat on solids, liquids and gases should now be made, and these should be followed by similar experiments on the effect of pressure; the similar behaviour of gases, and the dissimilar behaviour of liquids and solids, is thus made clear. The condensation of gases is then demonstrated and explained, and also the conversion of solids and liquids into gases, and the dependence of boiling point on pressure and temperature. Regnault's method of determining gaseous densities is studied, and the method of determining vapour densities is illustrated. The molecular constitution of a gas is now discussed; the phenomena of gaseous and liquid diffusion are studied and a brief reference is made to the kinetic theory of gases; then Avogadro's theorem is expounded and applied to the determination of molecular weights; and eventually the atomic theory is explained, and the manner in which atomic weights are ascertained is brought home to the pupils. The use of symbols must then be taught. Finally, the classification of the elements in accordance with the periodic law should be explained.

It is all-important that at least a large proportion of the experiments in each of the stages should be made by the pupils; but even if this were not done and the lessons took the form of demonstrations, much valuable instruction might still be given.

The majority of pupils probably would not proceed to the fifth and sixth stages; but those who persevere must terminate their studies without gaining any knowledge of chemical philosophy should unfailingly be led to make a few simple quantitative experiments: for example, to determine silver volumetrically, and the method of determining the composition of water and chalk gas should be demonstrated in their presence; and it may be added that if only the examples in Stages I. and II. and Problems I. to V. of Stage III. were thoroughly worked out, most important educational training would be given and much valuable information as to the nature of common phenomena would be gained.

The complete course would undoubtedly take up considerable time, but so does a satisfactory mathematical or classical course of study, and it is absurd to suppose that useful training in science is to be imparted in a few months.

It should also here be pointed out that the great majority of the experiments and exercises described may be carried out with very simple apparatus and with slight provision in the way of special laboratory accommodation. In but very few cases is there any production of unpleasant smells or noxious fumes. It is, in fact, a mistake to suppose that an elaborately fitted laboratory is in every case essential for successful teaching: much might be done in an ordinary schoolroom provided with a demonstration bench for the use of the teacher, a draught closet over the fire place, a sink, a raised table for balances (raised so that the teacher might see what was going on), a cupboard for apparatus, and a long narrow bench provided with gas burners at which, say, twenty pupils might stand, ten a side. If more attention were paid to the character of the work done and less to the tools with which it is accomplished, probably much less money would be wasted by inexperienced school authorities in providing special laboratories, and there would be much greater readiness displayed to enter on the teaching of experimental science. The course which has been sketched out is one which doubtless might well be modified in a variety of ways according to circumstances. Thus many simple exercises in mechanics, in addition to those directly mentioned, might be introduced into Stage II., and the mechanical properties of common materials might be somewhat fully studied at this stage in districts where engineering trades are largely established, and where such knowledge would be specially valuable. In like manner the physical effects of heat on substances might be studied in Stage III. instead of Stage VI. And there are other chemical problems and simple exercises besides those described which might be substituted for some of them, or included in the course.

## *HOW LATIN IS TAUGHT IN GERMAN SCHOOLS.*

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The plan of studying Latin in German schools is reduced to such a system, and the results attained are of such acknowledged merit, that it may be helpful to notice briefly its leading features.

A recitation is almost invariably conducted in the following manner: The review translation is read by one or, if long, by two or three of the pupils. It must be given without hesitation, and in good German. At its conclusion, the class offer brief criticisms. In order to give all the importance possible to this review, the pupil is often required to go forward and read it from the platform. Mistakes on the advance may be tolerated, but a perfect rendering is demanded on the review, and nothing short of this is accepted. Then the advance is taken up, and its difficulties are explained, sentence by sentence. Next, the master gives his own translation of what has been read. This he has prepared beforehand, the force and elegance of every word having been most carefully weighed, inasmuch as this rendering is to be considered as a model by the boys. Whatever strikes a boy as new or helpful in this translation, he jots down in his note-book. This is then reproduced by the pupils, in their own words, if possible. When time permits, translation at sight is practiced, but it forms no part of the regular, required work. In the upper classes of the *Gymnasia*, questions are asked and replies given in Latin, and some attempt at conversation in the same language is still made, but the latter practice is gradually dying out. Mythology, history, and geography, are thoroughly treated in connection with the text. Roots are not taught, except when of special interest as bearing upon common German words. Much attention is given to reading in Latin. This offers the pupils an opportunity to gain familiarity in understanding oral Latin, and readiness in replying in the same, besides making the language seem more like a living, usable tongue. Metres are learned only to secure an agreeable reading aloud. The music and sense evoked by these boys in their reading of Latin is a pleasure to hear. Mere pronunciation will not do. There must be accent, pause, swing, sense in it all.

The learning of forms, and most of the syntax, is taken up very thoroughly in the first part of the course, and thereafter only referred to when absolutely necessary to make clear the meaning of the text. The idea is to lead boys to the study of Latin as a literature, and not to use it as a field for grammatical gymnastics. In the early stages of the course the plan of study is, in the main, similar to that in the best American schools. That is, forms, translations from German into Latin, and from Latin into German, vocabularies and *colloquia* are taken up simultaneously from the first. More than a year is spent by a beginning class on forms, syntax being mentioned only when it becomes absolutely necessary in order to make clear an unusual form in a sentence. For this elementary work they use a special and very simple grammar, containing scarcely more than fifty pages. This is exchanged for a more comprehensive one as the pupil advances and becomes capable of threading his way through the mazes of exceptions and other complications of Latin grammar. The exercises in translation are, from the very beginning, thrown into narrative or dialogue form, thus giving life and interest, and affording better practice for future work in translation than is afforded by the disconnected, forced sentences in American text books. Repetition is what the German master relies on for success in his teaching, and hence we find these Latin exercises twice as numerous as in our own books. Moreover, they are not there for ornamentation, —they are used, one and all.

Very little blackboard work is done at any time during the course, oral work taking its place. This, doubtless, aids very largely in making the German boy the fluent, ready pupil that we find him. The German teacher has one advantage over our own teachers in that he has his beginning classes twice a day instead of once.

The authors read in a German Gymnasium embrace those commonly used in this country, with several in addition. Before Caesar is reached, Nepos and Sallust are read; and after Vergil come Ovid, the *Ars Poetica* and Odes of Horace, and one or two of the longer works of Cicero.

Much writing in Latin is done. The exercises are kept in notebooks, most carefully written in ink, with ample space for corrections by the masters, who with equal care makes his corrections with red ink. Pupils are required to be familiar with all phrases in the review, repeating them with great glibness when the master has given the German equivalent. In the books used in the early stages



of the course, the new words on each page are grouped in vocabularies by themselves in the back part of the book, saving much valuable time for the pupil. A general vocabulary is also added. Notes are generally on the same page as the text. They seldom give any translation but refer to grammatical points, equivalent phrases in French, English, or Greek, other texts, and general explanations. All told, however, they are few and brief.

It is a delight and a revelation to Americans to hear a class of German boys reciting in Latin. There is a tremendous amount of vim in both master and pupils, and questions and answers follow each other like sparks from an electric machine. Very often the master cannot ever spare time to call boys by name when they are to recite, but shortens matters by pointing at this one or that one, as his questions are quickly put and as quickly answered. The boys show such readiness and ease in translation, such a comprehension of Latin idioms, such an ability to write and to talk, or, at least, to handle in a colloquial way Latin phrases and quotations, that it makes the language seem almost a modern one, and the boys themselves prodigies of learning. However, I suspect that the superiority in Latin of the German over the American boy is more largely due to the training received by the former, from the very beginning of his school life than it is to the superiority of the German method of teaching Latin in particular. At the very outset of his life in school he is handled by men; moreover, by men whose high attainments are vouched for by the State. These German masters are exacting and severe with their pupils, even to a fault; and lord it over the parents in much the same way in regard to all school matters. A boy understands from the first that school means business, that he *must* get his lessons by hook or by crook, that his parents cannot beg him off. With such handling from men who are thoroughly qualified to instruct as well to discipline, and with exact and uniform requirements set by the State for all its schools, it is no wonder that pupils come to the Gymnasia prepared to take up Latin; and that, we all know, is half the battle. In the Gymnasium the same "must-be-done" is understood to be in force, and is obeyed. Added to this is the pleasant prospect of but one year of military service for those who succeed in reaching the Third Class and have deported themselves creditably as against three years of service for those who have failed in either direction. If the sweets of learning do not appeal naturally to a boy, here, certainly, is an appetizer.

Requiring a boy to be in school during recitation periods only, thus allowing quiet home study, and removing the long strain of five continuous hours in school, as is common in American high schools, must be a decided step in elevating scholarship. Finally, a German boy is never graduated until he has passed that severe and dignified ordeal—the Final Examination. This lasts, off and on, for two weeks, consists of both oral and written work, and is conducted by the masters in the presence of the State Superintendent, the Faculty of the Gymnasium, and the public. It is not limited to the work of one year, but requires a thorough mastering of whatever the boy has been taught in the Gymnasium. Thus it is that sham work receives a death blow. A boy who knows that at eighteen he may be asked to tell something which he learned at ten, is not likely to neglect honest, daily work. In this way education becomes something more than mere show; it is permanent culture, it is power acquired.

I have seen boys, thus trained, at the age of twenty, in the University of Berlin, leave full-fledged professors from this country completely discomfited and unable to follow their brilliant work. To be sure, the German boy begins his Latin when nine or ten years of age, thus getting about four years the start of our own; but compare the American with the German boy at eighteen years of age and the latter is a mere beginner judged by the scholarship of his German cousin. Nor dare I say that the German boy pays for this excellence in Latin by weakness and narrowness in other lines. On the contrary, he is equally advanced in other studies, unless we except the natural sciences. I have great confidence in American ability, but there is certainly something awry in our results in the teaching of Latin—indeed, in our own high school work generally—as this comparison shows. If the defect is not in the boy, then I am inclined to think it is in our school system and teachers. German boys, naturally heavy, are turned out at eighteen, thorough wide-awake scholars; American boys, naturally bright, are turned out at eighteen, more or less superficial, slow, mechanical pupils.

Not to enter into a discussion quite foreign to the purpose of this article, I cannot forbear to say that as long as we refuse to accept German methods, just so long are we foolishly refusing to profit by the example of a system which is producing results better than our own, and we can blame only ourselves for our shortcomings. If there is a "best" way, that will follow after we have accepted the

better one, now ours for the mere taking. I am well aware that we, as teachers, cannot bring about, at once, such radical changes in our school system as have been hinted at above, but if the new education is to come, if the public is to be educated up to its level, it must be through our efforts, for it is our *business* not only to teach, but to preach the gospel of education in what seems to us its best and highest form.

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### FRENCH LYCÉES.

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Few Americans have more than a faint idea of the French system of education. The pranks of the students in the Quartier Latin of Paris have received certain prominence in light literature, but no Tom Hughes has yet pictured their life, work, and habits in a lasting and popular form.

The principal reason, perhaps, why so little is generally known on the subject in this country is that American young men never go to France to complete their education as they do to the English or the German universities. There are always American students in art in Paris; a few go there for instruction in music; fewer still attend the medical course; but in the general educational institutions there are never any Americans, with the exception of a few sons of permanent residents in France.

The lycée system begins at the bottom with A B C, and turns out young men with a fair knowledge of the classics and more or less of one or two modern languages, mathematics, history, chemistry, philosophy, and all the ologies. The graduate takes the degree of *bachelier-ès-lettres*, or B.L. For the last two years there is a separate scientific course in the lycées that turns out *bacheliers-ès-sciences*.

The lycées are government institutions, under the direct charge of the Minister of Public Instruction. There is at least one of them in each of the eighty-seven departments into which France is divided, and in each of the principal cities there are several. The largest and best known of all are probably the Lycée Louis-le-Grand and the Lycée Henri IV., in Paris.

The lycée overshadows every other school system in France, and it leads directly to the higher technical schools. A graduate who

has taken his degrees may enter St. Cyr, the great military school, where the course is two years; the *École des Ponts et Chaussées*, the civil and military engineering institution; the *École Polytechnique*, or the *École de Droit* (law school). The lycée graduate is supposed to possess a liberal education, and to be ready for the world, unless his chosen career demands some special training.

The great Jesuit schools of France were the only real competitors of the lycées up to the date of the Jesuits' expulsion, and now the lycées stand practically alone. There are still large denominational schools, and private institutions without number, but they cannot compare with the lycées in attendance. What probably contributed more largely than any one other cause to the building up of the lycée system was the special privilege conferred by law upon the young men who had gained lycée degrees. These were required to serve only one year, instead of five, in the army. Graduates of other educational institutions who were able to pass the examinations for degrees had the same advantage as the young men from the lycées, but as the course in the Government schools was based solely upon the branches of knowledge requisite for the degree, and as all instructors in them are State officers of recognized ability, parents have naturally preferred to intrust their children to the lycées.

Little children of five and six may be sent to lycées. The first class is called *Primaire*, the next *Préparatoire*. Each lycée class takes one year, but the very young boys, except in cases of unwonted precocity, are kept for two years in each of these lower classes, where they learn reading, writing, spelling, arithmetic and sacred history, and recite simple fables.

In these classes the boys are trained in the line of strict military discipline, which they have to follow up to the very moment of their graduation. At half-past six on summer mornings, and at seven in winter, these little fellows jump out of their beds at the sound of the gong. There must not be a moment's loitering in the dormitory, for the *maitre d'études*, who sleeps in the curtained bed at one end of the room, will not tolerate it. They jump into their clothes and rush to the general lavatory, where they perform their ablutions under the eyes, at first, of some motherly women, who see that the washing is a reality—not a mere perfunctory ceremony. A quarter of an hour after the first gong another sounds, and the boys range themselves in marching order by the door, and at the master's com-



mand start down stairs for their study-rooms, keeping in line and in step until the signal is given for them to take their places.

The first business is a prayer, and this is invariably recited by the boy who can rattle it off in the quickest time. There is a fierce competition as to who shall have the privilege of saying it, and a dozen hands are outstretched until the *maître d'études* makes a sign to one of the youngsters, who begins by making the sign of the cross, as he says, "*Nomine Patris et Filii et Spiritû Sancti*," and so on. The average French *maître d'études* is not even a professed Christian. He is a young fellow who himself has been graduated recently, and who regards the prayer as a formality, and not as an act of devotion.

The prayer finished, the boys take their books and papers from the closets back of their desks and busy themselves preparing their lessons until a quarter to eight, when they are marched off to an abundant but simple breakfast, consisting usually of soup and bread. At noon they have dinner, with meat, vegetables, and a light wine, known as *abondance*, as the staples; at four they get a great piece of bread, and at half-past seven comes a supper of meat and preserves. Immediately after this last meal they are taken to bed. Twice a week the boys have gymnastics under the instruction, in the Paris lycées, of the best athletes to be found in the ranks of the *pompier*s (firemen). Otherwise the little fellows have the same routine of meals, studies, classes, recesses and bed, from the time they enter on Monday morning until they go home on Sunday morning.

With each successive class comes a change of some sort in hours and in studies. The time for recess grows shorter and the tasks become harder. From *Préparatoire* the boys go into *Huitième*, or the eighth class, where the study of Latin, German, and English is begun. In *Septième*, or seventh class, there is no new branch taken up; but with *Sixième*, Greek is added to the list of studies, and drawing lessons begin. By the time the students reach the *Quatrième* they are expected to compose Latin verses and to translate Anacreon and other Greek writers into metrical French. For the two highest classes the numbers are dropped, and they are respectively known as *Rhétorique* and *Philosophie*.

The greatest feature of the lycée course is the prominence given to Latin and Greek. In most of the classes the modern languages are taken up only twice a week, and for an hour and a half at a time, while history, geography, and mathematics come up but once. Each

professor gives out at each recitation some lesson for the pupils to learn and some task for them to write out before the next meeting. These written *devoirs*, as they are termed, usually take the shape of a translation to make, a map to draw, or a problem to solve. The lessons consist, to a large extent, of memorizing passages from the French, Latin, and Greek classics, and the favorite method of punishment is to make boys copy a certain number of Latin verses or to learn them during recess hours. Those who are especially unruly or lazy are kept in on Thursday afternoons—the French half-holiday—and on Sundays.

Every week a *compétition* is held in some study, and the result is made known in numerical order. The first in each division—and usually there are three divisions in a class in the big lycées, each containing from thirty-five to fifty pupils—gets a certificate worth four points, and the second gets one worth two. Each week either the principal professor or the *maître d'études*, makes a report in figures of the pupil's conduct and work. There are three heads—for behavior, lessons, and written tasks—and the highest mark to be obtained in each is six. For totals of sixteen, seventeen, and eighteen, certificates worth two points are given, and for totals of fourteen and fifteen one-point certificates are allowed. Whenever the total reaches ten or less, the scholar is kept in on Sunday—a very frequent occurrence. The professors in the different branches make monthly reports, with the same results for the pupils. Youths who have received not less than sixteen marks all through a month get an extra reward worth four points.

After the first three months of the scholastic year a sergeant-major is appointed in each class. He is the one whose aggregate number of marks is the highest, and he gets three gilt stripes on his coat-sleeve. In each division one sergeant and two corporals are named in the same manner, and get respectively two stripes and one stripe on the uniform.

Then comes the great event in lycée life, the banquet of St. Charlemagne, to which are invited only the pupils who have been once first in a weekly competition or three times second. It is not only for the fun of the banquet that all wish to attend it, but because of the honor. All of the guests are separately photographed, and the pictures are hung in a great frame in the visitors' room. At the close of the year two prizes are given in each study for each division—consisting in each case of a laurel crown and one or more books. These book

prizes may also be obtained during the year by surrendering certificates representing 100 points, but there are greater purposes to which these certificates are usually applied. One Sunday out of every two the pupils who are not specifically kept in are free to go to their homes, but the other Sunday is "pay day," and to get out, two points must be given. These certificates may frequently be given also to masters in lieu of punishments imposed for misconduct.

The sports of French youths consist of marbles, tops, and several games played with soft balls, foot-ball, running and jumping. The boys are almost all small, lithe, agile, and good gymnasts, but very few of them are really powerful. Athletic sports never have flourished to any great extent, though the Government is now endeavoring to promote them as a preparation for military service.

All French schoolboys wear uniforms, and every institution of learning has its distinctive dress. At a few lycées there is a difference between the full-dress uniform of the little and big boys, at many others there is no change in style from the day a little fellow enters *Primaire* until he leaves *Philosophie* after his ten or twelve years' labors. Where a difference exists, the usual style of uniform for the early classes consists of a blue broadcloth coat coming down to the waist and pointed in the back, with big gilt buttons containing the name of the lycée, and with some distinctive figure embroidered in gold on the lapel. The waistcoat is of the same material, cut very high in the throat so as to show only a couple of inches of white tie, and fastened with about a dozen small bright gilt buttons. The trowsers are of the same stuff and perfectly plain. In the higher classes the coat has long skirts. The caps are blue, with several rows of narrow gold braid around them and stiff rims. Variations in the uniform consist of narrow red edges on the coats, light blue stripes on the trowsers, heavier braiding on the caps, etc. The undress uniform is made up usually of a heavy black blouse for winter, and a pin-head black-and-white checked material for summer, a soft blue *béret*, and black trowsers.

French students never know anything about their clothes or what they happen to own. They know that once in a while they are called to the tailor's rooms and measured for new suits, and that bright, fresh things come to them occasionally, and that is about all. The wardrobes are in a different part of the buildings from the dormitories usually, and are under the charge of nuns, who keep everything in perfect order. Twice a week the students find complete

changes of linen on their beds; every morning they find a clean pair of shoes in the place of the dirty ones they wore the previous day; whenever they are going out they find their best uniform ready for them. Whenever things are needed outside of the ordinary run, they are fetched by an attendant. When the writer completed his lycée course he was simply astonished to find the quantity of linen—including everything from great, solid socks to tassel-tipped night-caps—that he was to take away with him.

The expenses of a lycée education are always moderate, according to American ideas, but vary slightly in different institutions; and there is a small increase in each class. There are no "extras," unless special lessons are desired in music, dancing, fencing, boxing, or the *savate*. No institution was ever more democratic than a lycée. These negro boys from Hayti mingle on terms of perfect equality with white youths, princes' sons make friends with the sons of their butchers. There is no feeling of caste. The writer attended the Lycée de Vanves, just outside the walls of Paris, an institution known under the Empire as the *Lycée du Prince Impérial*. In his class were one of the sons of Prince Jérôme Napoleon, a son of Admiral Potuau, ex-Minister of Marine; two sons of Nicolini, the tenor; a son of Carolus Duran, and representatives of a score of noted families, thrown together on the best of terms personally with young men who spent the holidays behind the counters of their parents' little shops.

There is a Roman Catholic chaple connected with each lycée, where services are held on Sundays. In Paris a Jewish rabbi and a Protestant minister also come in every week to give religious instruction.—*New York Evening Post*.

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#### NOTES.

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The completion of the twenty-fifth academic year of Vassar College is an important event in the history not only of the College but of the educational progress of the State. In 1865 few schools were able to fit girls for college and therefore Vassar established a preparatory department. After a time the secondary schools adapted themselves to meet the new demands, but the college did not at once



abandon this part of its work and thus became for a time a rival of the preparatory schools. This policy was continued longer than the educational condition of the State rendered necessary but it has not been without its redeeming features. It has enabled the college to appreciate the difficulties and to know the possibilities of thorough preparatory work, to understand thoroughly that the welfare of both college and school demands that each keep in touch with the life of the other. As a result Vassar College to a greater extent than most institutions stands committed to the policy of establishing the closest possible connection between all parts of our educational system. Nearly forty per cent of its students are prepared for college by the secondary schools of this state and it justly feels that the best interests of all are served by maintaining such a connection. It has evidently been with the thought of strengthening the bond already existing that a personal invitation has been extended by Vassar College to the principals of all the academies and high schools in the State to unite with it in celebrating its first quarter-centennial. We trust that a very large number of these invitations will be accepted.

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On any question of modern language learning or teaching the opinion of Professor Carl von Reinhardtstœttner will be acknowledged to be of weight. In a very readable brief essay included in his volume of "Aufsätze und Abhandlungen," he discusses this subject with piquancy and vigor. Naturally he speaks from the point of view of the *Gymnasium* rather than from that of the *Töchterschule*. Allowing, however, for the bias inevitable in a German humanist, we find his conclusions reasonable and sound. The author insists that the acquisition of a foreign modern language is a work of vastly greater difficulty than it is usually allowed or claimed to be. Forms and syntax are, at the outset, a hard conquest. A correct pronunciation is still more difficult, and is only very rarely achieved. But phraseology, he maintains, is all but impossible,—absolutely impossible without long residence in the foreign country with close and unremitting application.

Pronunciation and phraseology, he argues, should always be taught by natives. It is too much to exact of any non-native teacher that he be an accomplished model to his pupils in these matters. The utmost that can be asked of such a teacher is that he implant no vices of sound or phrase that will subsequently have to be eradicated. But the necessary training in grammatical principles, in the history and

development of the language and its literature, can and should be committed to the regular teachers who are imbued with the general spirit and aims of the school. In a German gymnasium these aims are wholly "scientific." The "practical" end is always severely frowned upon in a truly humanistic school. Granted that a scientific purpose is to govern the entire school theory and practice, the modern languages should be taught like the ancient ones. But this assumption cannot be strictly carried into effect even in the purely scientific school. For even the man of science and learning will some day have to speak a foreign language, and hence it becomes needful that the instruction in school be a preparation, at least, for future practice. Thus Professor Reinhardtstoettner would have native teachers employed side by side with the domestic ones, and would have the latter themselves very thoroughly trained by foreign residence and study for their difficult function.

These conclusions are, of course, familiar to American school men. The only specially noteworthy idea which the author of the essay makes prominent is that modern language teaching requires far more thorough training in the teacher than is usually believed. This training will be long and expensive. Foreign residence alone will not guarantee its achievement. Assiduous study alone will not suffice. And given foreign residence and studious habits, there must exist a linguistic aptness in the natural endowments of the individual. Even then the standard of attainment must not be set too high. No one but a native ought to be expected to speak and write a language fluently and correctly.

As a rule, one should never venture to speak or write a language not one's own, except it be under unavoidable stress of circumstances or as a disciplinary exercise. That it is often ventured we know very well. Perhaps there is some definite point in a man's life,—say his twenty-fifth year,—before which he may indulge gracefully in "*parlieren*." But at some time he should give up the dangerous and unhandsome practice and write his foreign letters in his own idiom, while expecting his correspondents to answer in theirs.

It is astonishing with what temerity German *gelehrte* venture upon composition and actually upon publication in foreign modern languages. They do not hesitate to send us productions in English which we often have occasion to wish they had composed in their own language, so obscure are their efforts in the strange speech. But this is not the worst of it. To a native there is inevitably an

infantile and ridiculous sound in the talk of foreigners. A serious occasion will excuse it, but needless parade of adult stammerings and lisplings is at best absurd. So scholarly a linguist as Dr. Carl Sachs prints bilingual introductions to his edition of the plays of Shakespeare. Certainly he could have had no sufficient motive for such a self-exposure. No one who reads German a little will read the English side, the author's own idiom standing on the opposite pages.

The Germans have become so accustomed to writing in Latin without criticism that they naturally fall into the delusion that the same immunity awaits their efforts in modern languages. Their experience shows how much more difficult it is to meet native criticism than it is to encounter the learned criticism of one's peers. The fact is, the most scholarly acquisitions in Latin and Greek stand for a measure of intellectual effort and patient training which would leave lamentable short comings if applied to the mastery of the pronunciation and the phraseology of a modern language.

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The many Latin teachers that have a vivid remembrance of their own struggles with Latin Prose Composition, which left them with unpleasant recollections of a certain *Balbus* and a greater or less facility in the use of certain constructions, but without the ability to express a succession of simple ideas in comprehensible Latin, will welcome any and all attempts towards a more rational treatment of the subject. And it has come to be generally admitted that a rational treatment of Latin writing must go hand in hand with a changed view of the best methods of Latin reading. Neither is best secured by the presentation of certain rules which are then illustrated by sentences; but both are to be gained by a familiarity with actual Latin usage as the men that thought in Latin have left it to us. Among the books that recognize this and help towards its accomplishment one of the very best is Daniell's "*Exercises in Latin Composition*."\* The author has wisely made simplicity and clearness his first aims. The exercises teach the common usual constructions and are unencumbered by grammatical subtleties. The pupil is taught to express himself in Latin before he is encouraged to grapple with difficulties a successful conflict with which implies a high degree of philosophical insight and linguistic sense. Doubtless the scholar in

\**Exercises in Latin Composition for Schools*. By M. Grant Daniell, A. M., Principal of Chauncy-Hall School, Boston. Part I. based upon Caesar's Gallic War, Books I.—IV. Boston and New York: Leach, Shewell and Sanborn.

a preparatory school may be taught to follow a model of any degree of difficulty but equally doubtless he will lose his hold on the construction as soon as he is out of sight of his model. One of the best results of the present method is that it relieves the pupil's mind of that panic fear which so often seizes him at the idea of writing Latin. He learns that it is quite possible to say, "*Cæsar sent his soldiers into Gaul*," without any severe intellectual strain; and his interest grows with his confidence. We of the older generation had very little hope that we should ever be able actually to write in Latin; the best that we expected was a moderate success in putting English sentences into the strange idiom, which is quite another matter. With such a book as that of Mr Daniell the student soon finds himself going directly from the idea as it is presented to him by Cæsar to the form that the Latin idiom requires without the intervention of an English translation. The notes are very plain and helpful, suggestive rather than explanatory and dealing with real difficulties rather than, as is too often the case, with difficulties that are created by the English translation and not inherent in the Latin. Mr. Daniell and all Latin teachers and scholars with him are to be congratulated upon the success of the book, the attractiveness of which is increased by the excellent form in which it is presented by the publishers.

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*BOOKS RECEIVED.\**

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*Grammar for Common Schools.* By B. F. Tweed, A. M., late Supervisor in the Boston schools. Boston: Lee & Shepard. 1886. pp. V. 126.

The chief characteristic of Mr. Tweed's little grammar is its unvarying note of kindly and mellow wisdom. It is nowhere sharp, critical and dogmatic. Where it departs from the custom of school grammars, it never hurts the routinists by the manner in which it announces its dissent. It will make no grammatical enemies, as its author never made any personal ones.

The most marked innovation that we find in the body of the book is the neat and simple manner in which it presents the forms of the English verb. This we heartily approve. The long paradigm, with its tedious repetitions of the same forms, gives place to brief statements that tell the whole story. The Latin verb needs a paradigm:

\* Any of these books may be more fully noticed hereafter.



the English verb accordingly has always been stretched out to fit a similar frame. To abandon this custom is surely a mark of sweet reasonableness.

Mr. Tweed retains the potential mode, yielding herein to ancient prepossessions, and defines this mode in the traditional way. *Case* he defines as "the relation which a noun or pronoun sustains to some other word"; then he says, "there are three cases." May it not occur to some bright pupil to complete the syllogism, and to conclude that there are three relations which a noun or pronoun may sustain to some other word? We have known a language teacher of long experience and great knowledge unable to distinguish between the nominative case and the subject relation. *Mode* is defined by Mr. Tweed as "the manner in which a verb is used"; then he says, "there are four modes,—the indicative, the potential, the subjunctive, and the imperative. The infinitive and the participles he calls "forms of the verb."

The most interesting part of the book is the too brief appendix. Here the author puts himself in relation to Scientific grammar. Here he doubts the propriety of recognizing a potential mode. Here he defends, all too mildly, we confess, for our more strenuous convictions, the speech-forms *had as lief, had better, had best, had like, had as good, had rather, house to let, the house is building, two first, the tallest of the two*,—forms which the sciolists cannot parse, but which the English race has used for centuries.

Lingual critics are apt to be very harsh in their presentation of doctrine. Too often their teachings are mere screeds and onslaughts. Too often they mingle with their censures contemptuous flings at teachers as pedants who spoil our language in their wise ignorance. Hence their influence over the teaching body is naturally very small, and the instructors of our children are left to pay an undeserved homage to the traditional text-books. For men possessing the requisite knowledge and endowed with urbanity of manner and persuasiveness of speech,—for men like Mr. Tweed,—there is a sphere of possible usefulness in teaching our teachers. We wish Mr. Tweed would make a little book for teachers solely, to help explode some of the speech-superstitions under which they labor.

*Elementary Psychology*, with Practical Applications to Education and Conduct of Life, including an outline of Logic, for the use of High Schools, Normal Schools and Academies, Teachers and the General Reader. By James H. Baker, A. M., Principal of High School, District No. 1, Denver. New York: Effingham, Maynard & Co., Publishers, 771 Broadway, and 67 and 69 Ninth Street. 1890.

*Arbor Day Manual.* An Aid in Preparing Programs for Arbor Day Exercises. Containing Choice Selections on Trees, Forests, Flowers, and Kindred Subjects: Arbor Day Music, Specimen Programs, etc. Edited and Compiled by Charles R. Skinner, A. M., Deputy Supt. of Public Instruction, State of New York. Albany: Weed, Parsons and Company. 1890.

Heath's Modern Language Series. *Minna von Barnhelm* oder *Das Soldatenglück.* Lustspiel in Fünf Aufzügen Von G. E. Lessing, 1763. With an Introduction and notes. By Sylvester Primer, Ph. D., Professor of the Modern Languages at the Friends' School, Providence, R. I. Boston, U. S. A.: D. C. Heath and Co., Publishers. 1890.

Heath's Modern Language Series. *Practical Lessons in German Conversation.* A Companion to all German Grammars. By A. L. Meissner, M. A., Ph. D., D. Lit., Librarian and Professor of Modern Languages in Queen's College, Belfast. Boston: D. C. Heath and Co., Publishers. 1889.

Heath's Modern Language Series. *Sesenheim* from *Goethe's Dichtung und Wahrheit.* Edited, with an Introduction and Notes. By H. C. O. Huss, Ph. D., Professor of Modern Languages and Literature in the College of New Jersey, Princeton. Boston: D. C. Heath & Co. 1889.

*Black Beauty:* His Grooms and Companions. By A. Sewell. The "Uncle Tom's Cabin" of a Horse. American Edition Published by the American Humane Education Society. George T. Angell, President, 19 Milk Street, Boston.

Riverside Literature Series. Poems and Prose Passages from the works of John Greenleaf Whittier, for Homes, Libraries and Schools. Compiled by Josephine E. Hodgdon. Illustrated. Boston: Houghton, Mifflin & Co. 1889.

Riverside Literature Series. Poems and Prose passages from the works of Oliver Wendell Holmes. For Homes, Libraries and Schools. Compiled by Josephine E. Hodgdon. Illustrated. Boston: Houghton, Mifflin & Co. 1889.

Clarendon Press Series. *Exemplaria Graeca.* Selections from passages for Translation into Greek. By John Young Sargent, M. A., Fellow and Tutor of Hertford College, Oxford. Oxford: At the Clarendon Press. 1889.

*Notes on American Schools and Training Colleges.* By J. G. Fitch, M. A., LL. D., one of Her Majesty's Chief Inspectors of Training Colleges. London and New York: Macmillan and Co., 1890.

Elementary Classics. *The Alcestis of Euripides.* With Introduction Notes, Appendices, and a Complete Vocabulary. By M. A. Bayfield, M. A. London and New York: Macmillan and Co. 1890.

Milton's *Samson Agonistes*, with notes and Introduction. By H. M. Percival, M. A., Professor of English Literature, Presidency College, Calcutta. London and New York: Macmillan & Co. 1890.

*Macbeth*, with An Introduction and Notes. By K. Deighton. Fellow of the Universities of Calcutta and Allahabad. London and New York: Macmillan and Company. 1890.

The Riverside Literature Series. *Old Testament Stories* in Scripture Language. From the Dispersion at Babel to the Conquest of Canaan. Houghton, Mifflin & Co. 1890.

Macmillan's Latin Course. *Second Part.* By A. M. Cook, M. A., Assistant Master in St. Paul's School. London and New York: Macmillan and Co. 1890

# THE ACADEMY:

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*A JOURNAL OF SECONDARY EDUCATION*

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*THE TEACHING OF HISTORY IN ACADEMIES AND  
COLLEGES.*

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THE old Greek legend representing the muse of history as of divine lineage and the eldest of her sisters rested on a philosophic as well as a poetic basis. With dim perceptions of the nature of a future life, men early sought it in the record of their earthly deeds, hoping thus to win immortality in spite of death.

History thus ministered to the individual and in the dim twilight of the race sang the wrath of Peleus' son and the fortunes of the exiled men of Troy. As the importance of the individual became merged in that of the nation, it was the jealousies of rival states and foreign conquests that employed her pen. Nations, like individuals, were of special interest to themselves, and their achievements in war and politics were recorded by admiring and servile chroniclers. Men saw in history only an attempt to rescue from oblivion national and individual deeds worthy of emulation or demanding universal condemnation. Until our own period, therefore, the muse of history has, with few exceptions, been an annalist looking from a lower window. Men and events have passed before her, but she has not cared whence they came or whither they went. But as modern chemistry is the outgrowth of medieval alchemy and astronomy of the astrology of a still more an-

cient day, so modern history has been developed from these chronicles of a remote past. Clio no longer seeks alone to win enduring fame for her favored heroes, but she depicts the past that men may live more wisely in the present. As the muse of comparative history, she goes to the mountain top and makes the whole world hers by right of eminent domain.

Several influences have contributed to bring about this change, but the most important have come through the French Revolution. Those great intellectual movements that culminated in the overthrow of absolutism in France and the creation of new political ideals throughout Western Europe gave to history a different conception of the relative position of potentates and peoples. The subject gained new dignity as it abandoned the homage previously paid to civil, military, and ecclesiastical rulers, and concerned itself more with the characteristics of nations. Voltaire anticipated Macaulay and Green by one hundred years when he wrote, "I wish to write a history, not of wars, but of society. . . . I want to know what were the steps by which men passed from barbarism to civilization." History has thus during the present century gained a new theme in the portrayal of those democratic tendencies of which its new purpose has been the result.

But not only did the French Revolution create a truer historical perspective within the different nations — it also widened the horizon of each. The armies of Napoleon and the allies that swept over Europe from the Spanish peninsula to the heart of Russia broke down the artificial barriers that had separated nation from nation. Provincialism was diminished, national interest was less self-centered, states for the first time became aware of the existence of institutions after which their own might profitably be modeled. The political, social, industrial and educational condition of nations became of more vital interest than the hours of dining and retiring of capricious sovereigns. The study of comparative history was born of the same destructive forces that overthrew the oldest and apparently most stable institutions of Europe.

While history has thus been indebted to political revolutions for new themes, it has also been indebted to changing intellectual standards for new methods of work. The early age had been one of credulity and adulation. But men came in time to see that "fables begin to be current in one generation, are established in the second, become respectable in the third, while in the fourth, temples are raised in their honor." Skepticism and speculative thought followed in turn, and



these have been superseded by a demand for the study of facts, not for their own sake, but to determine the laws that govern them. Science and scientific methods have become controlling intellectual forces, and history, like every other subject, has come under this influence. As a result of this awakening, Voltaire in France, Niebuhr in Germany, and Arnold in England, gave the impulse to that form of historical writing which has made history preëminent in the world of letters in our own century. It has not been forgotten that there were immortal names in Greece and Rome and that the eighteenth century produced a Gibbon, but these are exceptions that show that the true historical spirit characterized the individual, not the age.

If history has thus been affected by the credulity of one period and the indiscriminating love of facts of another, now by speculative tendencies and again by scientific movements, is it not a chameleon unworthy of consideration among more stable subjects? The important place it has won for itself in the curricula of all our colleges and secondary schools must at this time be a sufficient answer to the question, but it is fitting to ask what are the dangers that at present beset the path of students and teachers of history.

The first danger is the failure to recognize the individuality of history. This is often due to a desire to acknowledge the indebtedness of history to science. Schools announce the employment in history of "laboratory methods," publishers advertise text-books in history constructed on the laboratory plan, and a recent catalogue of a large and important university proclaims that no text-book in history is used, but that one is being prepared by the professor and advanced students in the historical laboratory of the university. Historical laboratory indeed! Is the old word *library* to become obsolete and referred in the next edition of Webster to the heading laboratory? Must our study table give place to a more scientific article of furniture yet to be produced in some other historico-scientific workshop? The true student and teacher of history is ever foremost to confess his obligation to scientific methods, but he will never recognize in history a subdivision of physics or biology, or look forward to an historical Newton who will reduce the events of the past to mathematical formulæ or physical laws.

A second phase of the same danger assumes the form of a desire to make history the vehicle for our philosophical conceptions of the past, present and future. This desire to know and to teach the philosophy of history is a reaction against that spirit which saw in the events of

the past only an enumeration of facts, a skeleton without flesh and blood. This reaction has been inevitable and in a sense is not to be regretted, but it has brought its own attending dangers. A class of teachers by no means small in numbers or restricted in influence, whose knowledge of history and of philosophy is based on Hegel's Philosophy of History, supplemented by a course of lectures at the Concord School, is to-day instructing history classes in our high schools that the ultimate aim of the world is the mind's consciousness of its rational freedom. For the type of mind that has first grasped the idea that it is not all of history to teach Barnes's text-books memoriter from cover to cover, the transition is easy to the Hegelian conception that in Greece the mind was introspective; among the Romans the mind was resolved into generality, which makes mind itself universal; while in Christianity the mind first withdraws into pure introspection in communion with the universal; then follows the reconciliation, which is the introspective mind transforming the world. (Diesterweg's summary.) A disciple of this school, whose sublime indifference to the fact that the Norman Conquest came in the eleventh rather than in the first or the nineteenth century had been the despair of his instructor, when asked what material he would select for a class in history in the grammar grades, replied promptly, "I would teach them the philosophy of history." It is this spirit that teaches in our academies and high schools the philosophical, psychological and physiological aspects of the French Revolution, that discusses history, as has been said of Mr. Carlyle's Frederick the Great, "in the past potential subjunctive," and all this without any sound, accurate knowledge of the facts on which the conclusions of others have been based.

A third danger comes in the adaptation of the fatalistic "whatever is, is right," into the fashionable "whatever is European, is right." This again is but the expression of a reaction against a too fervid patriotism which would have nothing of the effete monarchies of the old world; but special evils follow in its train. The college that employs laboratory methods and teaches the philosophy of history to freshmen glories in "original investigation" and the German seminary. He is of all men most deceived who dreams that the German *Seminarium* can be built up on anything but a German university basis. Doubtless the word seminary is often used with us to characterize a form of instruction affording special freedom of intercourse between professor and student, and in this sense its use is not objectionable, but the typical German seminary in an American college is an anomaly.

A fourth danger comes from another adaptation of the old saying into "whatever is new, is right." This again is a reaction against certain misconceptions of the subject-matter of history. Since Mr. Green wrote his "Short History of the English People" in protest against the previous exclusive consideration of military and political affairs it has become the fashion to decry every history that does not treat of "the people." The protest has been well made, but there is danger that the teacher who welcomes emancipation from the drudgery that compelled the memorization of all the campaigns of the Revolutionary War will forget that

"civlyzation doos git forrid  
Sometimes upon a powder cart."

There is a temptation to overlook the fact that we are conscious of our political constitution as of our physical body only when it is out of order and that the study of preventive politics, like preventive medicine, has a proper place. The fault of all early writers and teachers of history was not in the consideration, but in the exclusive consideration of military and political affairs. He errs in like degree who teaches that these phases of a nation's life can be ignored. He is wise who sees them in their proper relation to other phenomena of society.

These four dangers, the loss of the individuality of history in, first, the scientific tendencies, and second, the philosophical aspirations of the times, the attempted transplanting of foreign methods to American soil and the recent ignoring of certain vital portions of history, all grow out of the proneness in the human mind to seize half of a truth and remain content with it. We have learned in medicine, but alas! not yet in pedagogy, the fallacy of the argument that if a little of a thing is good, more must be better. Each of these methods of teaching history is half right, but wholly wrong. A scientific method in its study we must have, but to treat history as an exact science is to degrade it from its own exalted position, since all imitation is demeaning. The relation of cause and effect every beginner in history must be able to see, but to introduce Hegel, Schlegel or Lotze into the classroom of the average academy or college is to caricature both history and philosophy. The German seminary is good—in Germany, and the adaptation of many of its methods may be good for us in so far as it teaches us to subordinate rhetoric to fact and to consult original documents. The history of peoples we must have, but of peoples concerned in war and politics as well as in literature and industries.

If we are to avoid these and similar dangers, we must clearly understand first, the general principles that should control all teaching of history, and second, the line of demarkation between history as taught in the secondary school, in the normal school, and in the college and university.

History, wherever taught, should ever keep in mind, as regards the choice of subject-matter, the practical end. Perhaps we come late in life to realize that history, like virtue, is its own reward, as we learn to appreciate Mr. Lowell's definition of a university as a place where nothing useful can be learned. But the practical end must come first and lead up to it. This end must be the creation of an intelligent understanding of American history, American institutions, American ideals. This does not imply that we are to teach American history exclusively — far from it, but our national history is to be at once the beginning and the climax of all historical study. The necessity for this is the greater since we have but recently come to recognize the importance of historical study. Not until the civil war had made possible a true national life did we dare to bid defiance to sectional and local jealousies and study our own past. On the other hand, the study of European institutions was neglected, for the Monroe doctrine took root educationally as well as politically. When the centennial anniversary of our independence lessened our prejudices and removed somewhat our insular character, a new interest came in the study of European history and politics. We have thus come to realize that both American and European history must be taught in view of the large number of foreigners annually coming to our shores, the early age at which many American boys and girls leave school, and the grave political problems yet unsettled and demanding the serious attention of every mature mind. Bishop Potter in his recent Phi Beta Kappa address on "The Scholar and the State," has shown the necessity of keeping ever present, even in the higher paths of learning, the plain truths that history teaches if we are not to be wrecked on the shoals where other nations have gone down. From strange localities the encouragement comes to begin and to continue this work. On Rivington street, in the slums of New York, in a district from which comes one-tenth of the criminals of New York city, a college settlement has been established, and in connection with it a free library. The librarian reports that the first demand of every boy is for a life of George Washington, and that when the biographies have been exhausted, the second choice is for a history that has "something about George Washington." If a recent magazine article on "Why an Irish boy should make a good



American citizen," could teach not only our friends from the Emerald Isle, but immigrants from other nations as well, their duties as citizens of the Republic, and if Bishop Potter's address could be placed in the hands of every native American, the teaching of history would receive greater encouragement than has yet been vouchsafed to it.

If the practical end should be our objective point, three general principles should lead us to it.

The first step in beginning any historical work is to give a bird's-eye-view of the whole subject. What Bunker Hill monument is to Boston, the Brooklyn bridge to New York and the Eiffel tower to Paris, that the general outline is in all historical study. One school of writers has often of late urged the theory that historical study should begin with local history, that the town and county should come first, the nation last. But this is much like attempting to draw a map of the United States by locating New York City, Chicago, San Francisco and Key West and then drawing the coast lines. It is the historical Cuvier, not the novice, who can take an isolated portion of local history and reconstruct from it an historical whole.

A second general principle is that in history, as well as in pure and applied science, the student must become familiar with the terminology employed. The words *state, constitution, law, pure democracy, representative government*, must be as clearly understood as straight line and angle, base and salt. In this way much local history and many political principles can be, indeed must be, taught by way of illustration. "Taxation without representation" is a glittering generality, but it has meaning when the principles of taxation are understood and when it is evident why we never pay a direct tax without complaining and why some persons can look with equanimity upon the payment — by others — of an indirect tax of twenty per cent on foreign books.

A third general aim should be to train the student to do independent work. This can be done by putting into the hands of the students, even of high-school boys and girls, a certain amount of original material. The amount as well as the kind must vary with the nature of the school and the time given to the subject, but to pupils of even the lowest grade the Constitution of the United States must be something more than "what is in the back part of the book"; the Declaration of Independence must teach him why the colonies revolted, and his Iliad must show him the condition of society in the Homeric age. The best working outfit for every grade is a text-book containing a brief outline of facts, supplemented by original documents, selected with reference to the needs of special classes. Publishers are ever

ready to meet such demands and have already given us the "Old South Leaflets," "The National Library," "English History from Contemporaneous Writers," and "Documents Illustrating American History," while the instructor can find compensation for one of his trials in the large number of old English chronicles made available in the Bohn edition. Some persons indeed have cried out in alarm against the free use of original documents, even in our colleges, as an introduction of "university methods." Such criticism, however, is due to a failure to understand what is meant by university methods and to a lack of discrimination between *independent* work, which should be done everywhere, and *original* work which properly belongs to the university.

These general principles we believe should govern all historical teaching, but there are certain specific principles that must be applied to the teaching of history in special grades. We may lay down the general proposition that in the secondary schools the distinctive aim should be the accumulation of historical knowledge, in the normal school the classification of such knowledge, in the college independent investigation, and in the university original investigation. This expresses, however, only the leading characteristic in each form of instruction, since in every grade must be found to a certain extent the distinguishing features of every other grade.

It has been said that in the secondary schools the distinctive aim should be the accumulation of historical knowledge. A German university professor was once asked the first step in historical study. His brief reply was "*Lesen.*" "And the second?" "*Viel lesen.*" "And the third?" "*Sehr viel lesen.*" The principle applies to work in the secondary schools. But here the instructor must be like the skillful engineer who constructs a tunnel by beginning at opposite sides of the mountain, knowing that the two ends of the tunnel will ultimately meet without the variation of a hair's breadth. At one end of the historical tunnel must be the reading, the much reading, the very much reading; at the other end, careful, systematic, dry, if you please, tedious drill. There must be the much reading, or the student early forms the pernicious habit of generalizing from one particular. There must be careful guidance to furnish a receptacle for this knowledge, or it is like water poured upon the ground. There must be general information, or the student becomes narrow; but general information alone is a jelly-fish, brilliant in coloring but formless and without use. In the secondary schools everything is grist that comes to the historical mill, but it is here also that the student must learn that "there is no northwest passage to the intellectual world."

The special province of the normal school is to emphasize the classification of historical knowledge. To the average normal-school student a fact is a fact. His knowledge is a Chinese painting, an historical crazy-quilt. He never sees that in history as well as in mathematics  $2 + 2 = 4$ . He has often much general information, especially concerning his own country, but it is an information and a zeal for information that leads him to ask "How many presidents have died in office?" "Who was president for a single day?" "Who fired the first gun in the Civil War?" "Who was the youngest soldier in the Revolution?" and to affirm in the same breath, "the reconciliation of the contradiction between its inner aim and life with its *actual* being is the *process* of the history of a nation. The collision between the *ideal* of a nation and the *actual* produces the process of history." The normal-school student must first of all be taught historical perspective, and second, that there is no historical multiplication table or system of mechanical memorizing either of details or of general principles that can be applied to the solution of historical problems.

If the secondary school is to encourage the accumulation of historical knowledge, and the normal school the classification of historical facts, it is the college and the university that is to be the investigator of historical subjects. It is said that every lawyer owes a debt of gratitude to his profession, so the obligation rests upon every special teacher and student of history to contribute something to the sum of historical knowledge. This contribution cannot be made during a college course, but the college student must be an investigator for himself, the tools must be put into his hands and he must learn their use. Like the high-school boy he must be an omnivorous reader, but he must also be a critical reader. Hume and Freeman are to be to him not merely names of historians, but of historians representing different schools of thought. Macaulay's every school-boy knows that taxation without representation was the cause of the Revolution, but the college student must know, if the school-boy does not, why but one of the twenty-seven complaints in the Declaration of Independence refers to the subject of taxation. The college student must know that Magna Charta is the corner-stone of English liberty, not because Bishop Stubbs and all the historians say so, but because he has himself studied that great instrument and the subsequent development of constitutional liberty. The college student must learn the condition of the church before the Reformation, not from Fisher, Hausser, and Alzog, but from Chaucer, Dante, Sir Thomas More and Erasmus. He must



know that history is not a simple substance, but a compound. He must be able to see that into it enter as component parts, politics, economics, statistics, finance, sociology, jurisprudence, archeology, philanthropy, comparative philology, every subject that concerns itself with the life of the individual or the nation. He must be familiar not only with the process of analysis, but also with that of composition.

What results are we justified in thinking should follow our best efforts in secondary school and college?

In the first place, history can do more than any other subject except science, to break down the barrier that too often rises between the instructor's desk and the classroom seats. No subject except science lends itself so readily to coöperative methods of work. Professor and student, teacher and pupil are alike seekers after truth and the library door swings outward for all. If, as has been said, aristocratic politics broke down with the French Revolution and aristocratic economics are fast disappearing in the light of the economic discussions of the day, so aristocratic pedagogics must yield to that spirit which makes students of both instructor and instructed.

Again, history is preëminently adapted to teach the fact that knowledge is singular in fact as well as in form. To the ordinary mind, Greek is Greek, geology is geology, and history is history. Caesar's "first impressions" of Britain, and Cicero's arraignment of Verres, which must have exhausted all the editions of the *Roman Herald* and *Evening Post*, are to the average school-boy, not history, politics, and literature, but Latin. The average college student turns for his history, not to his Caesar, but to Mommsen's chapter on the "Subjugation of the West," which in its narrative portion is but a paraphrase of the commentaries. Nothing is more difficult to overcome than this belief that each branch of knowledge is isolated. History, more than any other subject except literature, must show how every study in the school or college curriculum dovetails into every other study, making from seemingly isolated parts a compact whole. History must show that, while it itself works by scientific methods, science works by the historical method, that mathematics and music are first cousins, that art and philosophy are related, and that the study of Sanscrit roots has made "the whole world akin."

These are but suggestions of what history can and should do. History does not wish to supersede any or all other subjects in the academic or the college curriculum. It asks only a fair place and reasonable treatment.



## *SCHOOL INSTRUCTION IN MORALS AND MANNERS.\**

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JOHN TETLOW, GIRLS' HIGH AND LATIN SCHOOLS, BOSTON.

A YEAR ago last December, the Committee on Educational Progress of the Massachusetts Teachers' Association presented a report on moral training in the public schools. This report, as appears from the introductory paragraphs, was prepared under the stimulus of certain criticisms with which the prevailing optimism of a previous report, on "Progress in Grammar School Education," had been received.

A few months later, the Christian Register, impelled, doubtless, by the hostile attitude of the Roman Catholic press and clergy towards the public schools, and by the consequent growth of the parochial school system, devoted several pages of one of its issues to a discussion of moral instruction in the public schools.

Not long afterwards, a member of the Boston School Board, stirred, perhaps, by a sense of official responsibility for the obstreperous self-assertion and resentful behavior under correction which mark the manners of many of our youth, introduced an order, at a stated meeting of the Board, looking to the enlargement of the school courses of study by the addition of instruction in morals and manners.

Within a fortnight of the announcement of this order, the Evening Transcript, at that time the official organ of the Boston School Board, ascertained, through a member of its editorial staff, and published at length, the views of several gentlemen who were, or had been, officially connected with the schools of that city, on the subject of the proposed order. The Committee on Examinations, to whom the order was referred, reported that it was expedient to make provision for such instruction, and the School Board has recently made such provision.

It would seem, from this brief survey of recent events, that the behavior of youth is attracting general attention in the community, and that the present, therefore, is an unusually favorable time for the discussion of the subject of school instruction in morals and manners.

And first let me say that instruction in manners presupposes instruction in morals, and that no instruction in manners is worthy of the name that is not based on instruction in morals. This is only another way of saying that manners have no value except as they are the expression

\* By permission of the American Institute of Instruction.

of morals. The body is the mirror of the soul, and fine manners are the image in which are reflected the noble thoughts and impulses of the soul. If you would train a boy to have the manners of a gentleman, you must first train him to be a gentleman. When you have done that, you have done your work ; for the manners of a gentleman will appear spontaneously as the natural outward expression of the inward character. While, then, morals and manners are separable in thought, in life, and therefore in education, they are inseparable.

Of course I am speaking here, not of the superficial manners which, under the name of deportment, are taught in the dancing-school, still less of the conventional observances which, under the name of etiquette, originate in courts, or other artificially organized societies, and make their way by the law of imitation through the lower social strata. With etiquette, in its strictest sense, the public schools have nothing to do, for etiquette, as such, contributes nothing valuable to the formation of character. The interests which the schools have in charge are too precious, their work is too serious and their aims too noble to be confounded with the claims of etiquette. We may not waste their time or fritter away their resources in the cultivation of mere conventional decorum. I am speaking rather of universal manners, manners which have a natural, not an artificial origin, which spring from the impulses of a good heart acting under the regulative control of a sound mind. Such manners, I repeat, in education, as in life, are indissolubly associated with morals.

What, then, are some of the indispensable qualifications of the teacher who is to train his pupils in manners?

First of all, he must be sincere, must be genuine ; in a word, must be truthful in the largest sense. Brusque manners, with sincerity, are far preferable in a teacher to polished manners with disingenuousness. A pupil is rarely deceived by manners that are assumed for effect, that are merely official and ornamental ; and, whether he is deceived or not, he is morally injured by them. The teacher who has ever so smooth a varnish of external manners, but at the same time wants candor, who perhaps stings his pupils into the exact observance of the proprieties of behavior by the refined torture of polished but pitiless sarcasm, — such a teacher lacks the veriest rudiments of qualification for the delicate work of moulding the manners of youth. On the other hand, the teacher who lacks the graces of behavior, and who merely performs the routine work of the class-room, but performs that with conscientious fidelity, is at least laying a foundation on which a superstructure of fine manners can be raised without preliminary

demolition of what has been built before. He should do more than this, but even this will give him a substantial title to the respect and gratitude of his pupils in later life. Finally, the teacher who, besides performing with conscientious fidelity his strictly professional duties, carries into all his relations with his pupils the gracious spirit of courtesy, of appreciation, of sympathy, and who, on critical occasions, through the swift contagion of a generous enthusiasm, infuses into them his own moral earnestness, such a teacher has a power over the morals and manners of youth that is organic and vital, that pierces the outer crust of conventional decorum and penetrates the inner life of the soul.

Again, the teacher who aspires to mould the manners of his pupils must hold his temper under masterful control. The ebullitions of unreasonable anger, the sputterings of uncontrolled fretfulness, the snarlings of self-indulgent petulance, in short any of the various manifestations of infirmity of temper into which the disappointing experiences of the class-room may betray the unwary teacher, are fatal to success in forming the behavior of youth. Pupils will forgive an occasional loss of patience or lapse of dignity on the part of their teacher, especially if, in the main, he is candid, sincere, magnanimous and just, but it is not so easy for them to forget it. They may love him in spite of his infirmity of temper, and may even respect him in part; but they will not, and they should not, unreservedly accept as their guide to perfect manners a teacher who has not acquired the power of self-control.

Moreover, the teacher of only average sweetness of disposition, if he would keep his temper unruffled in trying situations, must first be careful to preserve his health. Torpid circulation, deficient appetite, impaired digestion, and disturbed or insufficient sleep too often betray their victim into manifestations of irritability or moroseness. At least, they rob him of that elasticity of spirit, that abiding cheer, which is the supreme felicity of personal manners. The ideal teacher, therefore, will resist the temptations to overwork and strain which beset his calling, and will obtain relief for tired brain and nerves in social relaxation and physical exercise. He will not, for the sake of unduly accelerating the progress of his pupils, impose upon himself excessive drudgery in the correction of written papers; he will not, for the sake of gaining money or reputation, yield, at the risk of physical strain, to the seductions of authorship; he will not, for the sake of enjoying the satisfactions of scholarship, commit the apparently venial, but really unpardonable, sin of defrauding himself of social recreation or of sleep.

There are, indeed, but few qualifications in the outfit of a teacher that outweigh scholarship in importance; but there are a few. Among these, the abiding cheer and the unfailing tact and discretion which perfect physical health does so much to develop and foster, if not actually to create, certainly have a place.

The teacher who includes superb scholarship among his qualifications for service, is unquestionably an ornament to his profession; but, with schools organized, officered and supported as they are at present in this country, it must be added that such ornaments are to be accounted luxuries rather than necessities. At all events, the teacher who enriches his scholarship at the expense of his health, or who overtasks his physical powers in any other way, is doing his pupils an irreparable injury; is squandering that which is not wholly his to squander. Such a teacher will rarely be found prepared for the high function of moulding his pupils to the finer graces of behavior.

Then, too, the teacher who would mould the manners of his pupils, must appreciate the responsibilities which his office imposes, or better, the opportunities which it offers. For much depends on the teacher's attitude of mind towards his work. If, in considering the moral aspect of it, he dwells too much on the responsibilities which it imposes, his work is apt to want spring and spontaneity; whereas if, without ignoring his responsibility, he dwells rather on the richness of his opportunity, his work will have an inspiring quality that will greatly increase its effectiveness. Complete appreciation of the wealth of opportunity that invites the teacher's activity involves a recognition of the needs and the possibilities not merely of the intellectual, but of the moral and spiritual natures of his pupils. It estimates the results of education not solely by the proficiency acquired in the studies of the curriculum, but also by the strength, purity and sweetness of character developed through the school training. It eliminates from the standard by which school work is measured everything that stimulates the pupil to exertion by an appeal to unworthy motives; and aims, instead, to make the spirit embodied in Wordsworth's "Ode to Duty," the animating principle of every effort. It knows that, a word of encouragement for earnest, though unsuccessful effort, and an appreciative recognition of what is good in work that, as a whole, is imperfect, are more wholesome incentives to exertion than the ranking system, and more potent refiners of manners than appeals to the spirit of competition.

These are some of the more obvious qualifications needed by the teacher who would undertake the delicate task of forming the manners



of youth. I have said nothing of the subtler refinements of character and bearing that go to form the ideal teacher of behavior. That is a phase of the subject which I will not venture to discuss. It will not bear indifferent treatment. You have all read Emerson's essay on behavior. "I have seen manners," he says, "that make a similar impression with personal beauty; that give the like exhilaration and refine us like that; and in memorable experiences they are suddenly better than beauty, and make that superfluous and ugly." I never saw Emerson but once, and then his gracious presence exerted just the influence upon me which he here describes. I could wish my children no happier fortune than that of coming daily under the refining influence of such a personality. Daily association with a teacher of such characteristics through the formative period of youth would of itself be a liberal education.

But, given a teacher of the requisite qualifications, what shall he teach and how shall he teach it? As to the elements of behavior which constitute good manners in youth, and which, therefore, should form the subject-matter of instruction, there would probably be general agreement. Without attempting an exhaustive enumeration, we may say that truthfulness, modesty, and courtesy in the three domains of thought, speech, and action would by general consent be included among them. These elements of behavior, understood in their full meaning, are far-reaching and comprehensive. A volume might be written on the ethical principles which underlie them, and the applications to conduct which they suggest. But the literature of this branch of the subject is extensive, excellent and readily accessible, and for our present purpose a mere enumeration will suffice.

When we attempt to answer the question, "How shall the graces of behavior be taught in the schools?" we are confronted with one of the most difficult problems that pedagogy has to solve. "I do not think," says Emerson, "that any other than negative rules can be laid down. For positive rules, for suggestion, nature alone inspires it. Who dare assume to guide a youth, a maid, to perfect manners?—the golden mean is so delicate, difficult, say frankly unattainable. What finest hands would not be clumsy to sketch the genial precepts of the young girl's demeanor? The chances seem infinite against success; and yet success is continually attained. Nature lifts her easily, and without knowing it, over the impossibilities, and we are continually surprised with graces and felicities not only unteachable but indescribable."

And yet there are many who believe that the surest way of rendering the schools efficient promoters of good manners in the community is

to make morals and manners a substantive part of the course of study, and to assign a definite portion of time per week to formal instruction in them. It is not long since a group of clergymen and philanthropists in the city of Boston seriously set themselves the task of preparing a series of text-books in this department suited to the different grades of public schools.

Now, my personal experience as a teacher has been almost wholly confined to pupils of high-school age, and it would ill become me to dogmatize on a subject of this character. It may be that in the lower schools, where the pupils have not yet reached the age of self-consciousness, formal lessons in morals and manners learned and recited from a text-book, with judicious comment and illustration from the teacher, would be of service. But I doubt it. At any rate, when the pupil has reached the age at which youth begin to be observant of the bearing and manners of others, to be conscious of their own, and to be sensitive to the impression produced by their own personality on members of the opposite sex, the use of a text-book on morals and manners would, it seems to me, be a manifest violation of the laws of nature. If I wished to train a youth, whose speech abounded in vulgarisms, to the forms of speech and modes of utterance approved by the cultured classes, I should not expect to succeed by putting him through a course of lessons in phonetics. I should place far greater reliance on the silent teaching of refined associations, and should do my best to introduce him to good society. If I wished to make a poet of him, I should not instruct him in the details of versification, unfolding to him the mysteries of foot, rhythm, caesura, cadence, and the rest, but should set him to reading Spenser, Milton, Shakespeare, Browning, Shelley, Tennyson, Wordsworth and Burns. It is the same in the domain of manners. Bring a youth who has reached the age of self-consciousness, but who has boorish manners, in social contact with cultured ladies and gentlemen, and he becomes at once painfully conscious of his inferiority. Consciousness of inferiority is always the first step towards reclamation from barbarism. The soil of his mind is now prepared to receive the seeds of culture and to offer favorable conditions for their germination. You have only to plant them in this prepared soil and then stand aside and let nature do her perfect work. You will not assist germination and growth by probing, uprooting, resetting, etc. You have done the part of a good gardener in surrounding the young plantlet with favorable conditions for development. Now be patient, and let nature's rain and sunshine do the rest.

To the question, then, "How shall the teacher train his pupils to perfect manners?" I answer unhesitatingly, "Through the silent influence of his personal example." Manners are subtle. They cannot be analyzed, classified, diagrammed, demonstrated, memorized. Hence they are not to be taught like algebra, botany or parsing. But they can be felt, absorbed, assimilated, reproduced. Hence they can be taught unconsciously by example. Bishop Huntington, in an admirable essay on "Unconscious Tuition," says, "We are taught and we teach by something about us that never goes into language at all. I believe that often this is the very highest kind of teaching, most charged with moral power, most apt to go down among the secret springs of conduct, most effectual for vital issues, for the very reason that it is spiritual in its character, noiseless in its pretensions, and constant in its operations." Again, "The world is full of the proofs of the power of personal attributes. In most situations—in none more than a school—what a man is tells for vastly more than what he says. Nay, he may say nothing and there shall be an indescribable inspiration in his simple presence."

Not that there is no room for precept here. Undoubtedly there are some breaches of good manners that call for sharp rebuke, others that are best met by arguments addressed to the reason, others still that suggest an appeal to the pupil's sense of justice, honor, generosity. Such breaches of good manners must be met in the concrete as they arise, the nature of the admonition depending on the character of the offence. Text-book instruction in morals and manners, having nothing to start from but dry statements of moral obligation, would tend to become perfunctory, and would savor of what the victims of it call "preaching;" but an earnest utterance, called out by some incident of school life, having a moral bearing and aimed directly at the spirit that dictated the act condemned, would be instinct with life and power. The best way of purifying a vitiated taste in literature is, not to declaim against dime novels, but to fill the victim's leisure to the point of saturation with good literature and so purify his taste by the process of displacement. So the most efficient teacher of behavior is he who, when there are no concrete offenses against good manners demanding treatment, earnestly devotes himself in the spirit of truthfulness, modesty and courtesy in the domains of thought, speech and action to the regular work of the school. The teacher who cannot teach the graces of behavior through the silent influence of his personal example will certainly fail in his effort to teach them from a text-book; while the teacher who daily strives to cultivate the graces of



character, that he may the more safely trust the unconscious influence of his example, will as certainly find a text-book superfluous.

As to helpful, practical suggestions bearing on this department of the teacher's work, I have but a single observation to make, and that I offer with some diffidence. I shall say nothing of the value of establishing right relations between teacher and pupil at the beginning of the daily session, through the exchange of a simple greeting as the pupil passes the teacher's desk on his way to his seat; of the obligation which the teacher is under to lift his hat in recognition of his pupils on the street; of the law of courtesy which requires that the pupil should pass a book to a visitor in the class-room; of the good understanding which results from the tacit assumption on the part of the teacher that the pupil's spirit and motives are good in the absence of clear evidence to the contrary; or of the many minor observances which are as essential to the social economy of a well-regulated school as to that of a well-regulated drawing-room. Passing over these matters of detail, I shall speak in closing of the use that may be made of the opening exercise.

At the opening of the school session the minds of the pupils are in an exceptionally receptive state. At this time not only may the keynote be struck to which the harmonies of the entire session are to be attuned, but impressions may be made which will have a sensible share in forming permanent character. Our literature is rich, and it is steadily growing richer in materials that may be utilized, both directly and indirectly, in the interest of the graces of character and behavior. The reading of selections from this literature as a part of the opening exercise at the daily sessions of the school may be so managed that this single feature will determine the spirit that shall dominate the school. The teacher who merely reads, as the school regulations require, a passage from the Scriptures, and then, after taking the record of attendance and tardiness, sends out the classes for the first recitation, sacrifices, it seems to me, a precious opportunity. I am convinced that it is within the power of the teacher who has charge of a school room to create and to sustain precisely the moral tone which he wishes to have prevail, through the character of the morning readings. Growing abuses may be checked at an early stage, observed tendencies towards thoughtlessness or disloyalty may be repressed, high aspirations may be kindled and kept glowing, the sense of duty may be quickened, the love of nature, which ministers to the æsthetic sense, and so, indirectly, to the graces of behavior, may be developed and strengthened,—all through the character of the morning readings.



For example, at the opening session of the school year, when the teacher meets his old pupils after a long separation, and his new pupils for the first time, he may read to them Wordsworth's "Ode to Duty," or some poem of like content, as an inspiring expression of the high resolve with which the duties of the new school year should be met. If he wishes to quicken their love of nature, let him read, some fine spring morning, Wordsworth's poem on the dancing daffodils, or, some crisp morning in October, Bryant's "Fringed Gentian," or, some cold morning in winter, a passage from Lowell's "A Good Word for Winter."

For passages having a direct bearing on manners, there is nothing better than Emerson's Essay on "Behavior." Suppose, for instance, the teacher has learned that some of the girls under his care have attracted attention by their loud talking, or otherwise obtrusive behavior in the horse-cars on their way to school, what can give a finer point to a few words of earnest admonition than the closing passage of this essay, a part of which I have already quoted. Then, too, from Carlyle's "Essays," from Hamerton's "Intellectual Life," from "Hazlitt's "Table Talk," from "Charles Kingsley's Letters and Memoirs," from D'Arcy Thompson's "Day Dreams of a Schoolmaster," from James Freeman Clarke's "Self Culture," from Haweis's "Music and Morals," from Ruskin's "Sesame and Lilies," admirable selections may be made. Indeed, one of the satisfactions that reward the teacher for devoting a moderate part of his leisure to miscellaneous reading, may well be that of finding fresh material for use at these morning exercises.

These are a few of the many sources from which material may be drawn for the inspiration of pupils. For the teacher himself I can recommend nothing more profitable than Coleridge's familiar poem beginning :

"O'er wayward childhood would'st thou hold firm rule,  
And sun thee in the light of happy faces;  
Love, Hope and Patience, these must be thy graces,  
And in thine own heart let them first keep school."

and ending

"Yet haply there will come a weary day,  
When, overtask'd, at length  
Both Love and Hope beneath the load give way,  
Then with a statue's smile a statue's strength,  
Stands the mute sister, Patience, nothing loth,  
And, both supporting, does the work of both."

*THE CORRECTION OF BAD ENGLISH, AS A REQUIRE-  
MENT FOR ADMISSION TO HARVARD COLLEGE.\**

ABOUT eight years ago Harvard College began to require the correction of bad English as a part of the examination for admission. Under the head of "Specimens of Bad English," some twenty sentences were set before the candidate, for the correction of such errors as he might discover. In 1886, the responsibility of admitting candidates was transferred from the College Faculty to a committee of instructors representing all, or nearly all, the studies in which examination is offered; and from then till now I have had charge of the examination in English. The papers for June, 1886, Professor Hill and I made together; but for every paper since that time I alone am responsible.

In these last three years I have made three innovations:—

First, in answer to the well-grounded complaint of Professor Tufts, I have given the candidates more space in which to make their corrections. They are required, you know, to write on the examination paper itself, and should not be cramped by close printing and narrow margins.

Secondly, in answer to the complaint of several teachers, I have shortened the paper a little, reducing the twenty sentences to twelve or fifteen.

My third innovation sprang partly from my own convictions and partly from a recommendation by the Commission of New England Colleges.† In April, 1888, the Commission voted,—

"To recommend to the several faculties that the bad English sentences given for correction should not include sentences the meaning of which is obscure."

It is unreasonable to ask an excited boy, with a meagre allowance of time, to fashion a symmetrical organism out of a tangle of arms and legs. Yet that is what the College has occasionally done. The temptation to do it is stronger than would at first appear. The College likes to set before the boys, and their teachers, such errors as the boys themselves commit.‡ Among these errors is the habitual use of

\* A paper read before the Massachusetts Association of Classical and High School Teachers, April 4, 1890; by L. B. R. Briggs.

† "The Commission of Colleges in New England on Admission Examinations."

‡ The "Specimens of Bad English" on the September paper are regularly taken from the work of candidates in the preceding June.

sentences that are all arms and legs, — without head, tail, or body ; and by putting such sentences on the admission paper we call the attention of teachers sharply to the need of training boys in a knowledge of grammatical structure. Nevertheless I have tried to follow the recommendation of the Commission. Last June, indeed, my paper was so simple that I was, and am, ashamed of it.\*

I have sometimes thought of confining the paper to one or two sentences ; of selecting confused sentences, such as the boys themselves write ; and of demanding a careful statement of faults and an explanation for every correction. I have shrunk from this plan, however, and for three reasons : —

First : The plan is not in the spirit of the votes of the Commission.

Secondly : It implies better training than most schools can give.

Thirdly : It demands time for thought. The College allows no time ; and the candidate is incapable of thought. "Thinking," says Professor Hill, "is the last exercise in which college students employ their minds ;" and if this is true of college students, how much more is it true of "Sub-Freshmen !"

\* ENGLISH COMPOSITION. 2.

SPECIMENS OF BAD ENGLISH.

*Write your number on this paper.*

Correct *on this paper* all the errors you discover in the following sentences : —

1. A few years later he began his "Paradise Regained," but which he never finished.
2. While sitting in my room just after lunch, the fire alarm sounded.
3. The character of the agents, or persons, are next to be considered.
4. So honorable a connection might have been expected to have advanced our author's prospects.
5. Sometimes he would lay awake the whole night, trying but unable to make a single line.
6. Milton was too busy to much miss his wife.
7. Everybody had in their recollection the originals of the passages parodied.
8. Dryden neither became Master of Arts or a fellow of the University.
9. He consoles himself with the fancy that he had done a great work.
10. I think we will fall considerably under the mark in computing the poet's income at £600.
11. The Faculty from virtue of its position know thoroughly the needs of the students under them.
12. She confessed to having struck her husband with the axe, and plead self-defence.

Admission (1) 1889.

Complaints about the examination in the correction of bad English are usually interwoven with complaints about the other part of the English examination. Some years ago I heard at a meeting of teachers, in the Boston Latin School, a surprising screed against the examination as a whole. For composition, I learned, we prescribe subjects that demand both maturity and a minute knowledge of many books; for correction we prescribe a long array of sentences. By the words "Correct any errors you discover," we imply that some of the sentences may be right; and, in the opinion of an experienced teacher, some of them are right. I learned also that we allow but one hour for the whole examination.

By this time most teachers are better informed. They know that difficult subjects, though now and then offered to the candidate, are never forced on him; that minute knowledge of the prescribed books is neither required nor expected; and that the examination occupies an hour and a half, an hour being allotted to the composition alone.

Through no fault of the English Department, but half an hour remains for the correction of bad English. The time is too short for a satisfactory test in anything. A boy's intelligence, when laden with fifteen subjects, does not mind the helm so promptly that the instant it steers out of one examination it can get under way in another. Yet thorough success in a serious half-hour examination implies an almost instantaneous start. The "sentence paper" is a rough test, therefore; but, rough as it is, it is immensely valuable, for it marks off the trained boy from the untrained.

The charge that we pester and fool our candidates by setting before them for correction sentences already correct, I cannot squarely meet until I have seen at least one accurate sentence that the College has labelled as a "Specimen of Bad English." I take my stand upon the platform of honest ignorance, since I never wittingly printed as bad English, English that was not bad.

Yet, though false, the charge is weighty; for it points straight to a stumbling-block in the preparation of candidates. Unless the preparatory teacher and the college teacher agree what to condemn, there is a hard outlook for the boys.

What shall I print as "Specimens of Bad English?" It is idle to say, "Confine your choice to what every educated man knows to be bad." The obscure is prohibited; the illiterate insults both boy and teacher,—not to mention the University: but outside of the obscure and the illiterate there is nothing that every educated man knows to be bad.



What is more vulgar than *you was*? — yet some teachers defend it; more illegitimate than *it don't*? — yet many teachers use it; more slipshod than *I don't know as*? — yet most teachers never notice it; more inexact than dangling participles? — yet good authors employ them; more offensive to a trained eye or ear than *to thoroughly appreciate*, or *to cordially thank*? — yet of such phrases professors (even professors of English) are guilty again and again.

What is a surer sign of second-rate diction than the confusion of *shall* and *will*? Yet a teacher, writing to ask me why his best pupil failed at the English examination, ignores the commonest truths about *shall* and *will*. In this very building,\* in a discussion of preparation in English, I once heard a speech which showed plainly and repeatedly that to the speaker the distinction between *shall* and *will* was outer darkness. Indeed, I have heard a college professor declare that the distinction is “all purism.”

The same professor, by the way, affirms that spelling is “all purism;” and, to do him justice, he has the courage of his convictions. He, perhaps, can afford to neglect small distinctions; for he is a stimulating teacher and a brilliant man: but his pupils, who are neither instructive nor illustrious, do not rise above the need of accuracy; and those of his colleagues who teach English must spend time and labor in striving to counteract his influence. Nor does inaccuracy stop at professors: I know a college president who says *ain't* (unless he has mended his ways of late), and another who says *like I do*.

It is just such errors as I have named that college examination-papers should take pains to condemn; for to just such errors half-educated young men are continually exposed. Some authority, I know, may be pleaded for what I have called errors; otherwise it would be almost nugatory to ask the boys to correct them. The question always is, how much authority. We are prone to forget that English grammar is not immutable like the multiplication table; and that training in English grammar is not training in knowledge, but the far higher training in judgment. Though Miss Austen lets participles dangle, though Browning wedges adverbs into verbs infinitive, I maintain that such uses, casual with some good writers and intentional with others, should still be steadily avoided; and that so far as a writer of to-day does not avoid them, so far he is lacking either in training or in taste. I maintain further that if a teacher believes *shall* and *will* synonymous and *to not do* idiomatic, he should at least know that many critical per-

\* The Boston Latin School Building.

sons disagree with him, and should put his pupils into possession of the facts.

So much for the history of the examination and for the complaints about it. Now with regard to the preparation of candidates.

What I have said suggests the first requisite of preparation, — a judicious teacher; “neither a prig nor a sloven;” a man who will countenance an idiom though it impugn “Rule VIII. p. 41,” and who will not say *quite a ways off*, whatever his surroundings may be or may have been: who is, in a word, *accurate*, with the accuracy not of pedantry but of common-sense. If, like Overbury’s schoolmaster, “he dares not think a thought that the nominative case governs not the verb;” \* if he affects eloquence, and declaims about “environments” and “perfect gems;” if he gives the highest marks to the weakly grandiose writers (that the case is possible I know from complaints of weakly grandiose writers who “always got the best marks at school”); if — to borrow a figure from a friend — he does not teach his pupils to raise solid piles of brick and mortar before they put on their gargoyles; if he praises elevated sentiments that are obviously insincere; — if he is anything but a plain-spoken gentleman using all his power and all his culture in persistent effort to make his pupils say *what they think*, as simply, as directly, as logically as they can, he is not, whatever his attainments, the man to teach English to boys.

“Give us enthusiasm, not all this drill,” perhaps you say. I say, rather, “Give us enthusiasm *for* all this drill;” and, as between plodding accuracy and second-hand emotion, give us plodding accuracy always. It is so much easier to be gushing than to be scholarly! so much easier to use decorative cant which has been worked to the verge of nervous prostration than to be sincere and strong! so much easier to teach the rhetoric of “color” than to teach the rhetoric of truth! Color, as Viola said of Olivia’s face, is “excellently done, — if God did all;” but how much of what semi-literary critics call color is of God’s doing?

Next, the teacher of English should have room to work in. English should not be relegated as an “easy study” to Saturday sessions and “off hours” generally. English is not easy. Properly studied, it taxes the best powers of both pupil and master.

Next, the teacher of English should have the constant support of his colleagues. His position is delicate: he professes to teach nothing

\* Overbury: Characters, — A Pedant.

but what all the other teachers are presumed to know ; and the attitude of these teachers often leads the boys to believe that he is a man who makes a fuss about trifles because he knows nothing bigger to make a fuss about. A teacher of "Deportment" could hardly be more despised.

Unhappily, though English is better and better taught, there are still traces of the tradition that a man who fails totally in all other walks of life "will do for English." Impeded by this tradition ; with half an hour a day in which to counteract the blunders that his colleagues make in four hours and a half ; and with an overwhelming sense of inadequacy, the conscientious teacher of English struggles thanklessly on. He knows that, in the class-room, his own English is not half so good as if he felt less responsible for it. He knows that the boys know this, and contrast his halting speech with the unhampered eloquence of his fellows : "What right has *he*," they say, "to set himself up over *them* ?" The other teachers may well afford to encourage him — for do not they teach what he cannot ? — yet often they vote him down, object to his just demands upon the time of pupils, and refuse even outward support. If he tries to better his position by a pompous manner, he is lost, — and rightly ; if he yields in all things, he is lost, — and rightly again. In a study wherein ignorance is shameful and perfect accuracy unknown, the teacher must possess that most uncommon quality called common-sense. With that, and only with that, he may win the support of his colleagues and become a power in the school.

I speak the more emphatically of the embarrassments of the "English teacher," because scientific education is gaining ground and whole schools of scientific men are enthusiastically ignorant of English. Classical study often produces "Translation English," — and "Translation English" is bad enough : but classical study evinces at least an appetite for syntax ; whereas what is frequently called scientific study gorges itself with crude science, — as a misguided athlete bolts raw meat at a training-table.

True science has delicate thought to express, and needs delicate language to express it ; yet from Prize Essays on "Science in Secondary Schools" to text-books used in universities, scientific writing is often as arid and rocky as if the writers' minds had been neither irrigated nor cleared. Lop-sided enthusiasts slight all training in English until they are too busy to stop for it and too callous to let it in. As a result, we see university scholars writing English that would shame a Freshman, — and their works are put into a Freshman's hands. Even Mr. Her-

bert Spencer giving scientific treatment to a literary subject, "Philosophy of Style," writes with no style and with harsh inaccuracy.

Grant that the teacher of English is a sound man in healthy relation with both pupil and colleague, — how is he to prepare boys for the correction of bad English?

In answering this question I should differ from some teachers. I still believe that early training in formal grammar is the best introduction to the study of the English language. I have never seen a fit substitute for it, and have seldom met a man without it who was not conspicuously the worse off. "I hold very strongly," says Cardinal Newman, "that the first step in intellectual training is to impress upon a boy's mind the idea of science, method, order, principle, and system; of rule and exception, of richness and harmony. This is commonly and excellently done by making him begin with Grammar; nor can too great accuracy, or minuteness and subtlety of teaching, be used towards him, as his faculties expand, with this simple purpose."\*

I do not mean that ability to answer a sudden call for "Rule VIII., p. 41," is essential to anybody; nor do I believe, with a schoolmistress I know, that inability to define a "modifier of the third order" is a blot in the scutcheon. I mean that a young pupil should learn something of grammatical analysis, — of parsing; and that he should apply what he learns — first to graded exercises, secondly to short passages of good prose. To impress a boy with the truth that every sentence needs grammatical structure, make him scrutinize the structure of many sentences. Through parsing he will learn the groundwork of grammar; and the knowledge will stand by him while he lives.

My faith in the discipline of parsing is not purely theoretic. I remember with gratitude the master of a New England grammar school. He was not learned; in many ways he was not wise; but he was as good a teacher of elementary grammar as I could wish to see. He taught, not rules only, but the application of rules; he encouraged the discussion of open questions, never hesitating to admit that they were open. He maintained an attitude so far from "pedagogic" that it amazes me when I recall it. He was courteous as well as stimulating, always bearing himself as an elder soldier, not a better. Moreover, little boys as we were, we thought none the less of him — though perhaps more of ourselves — when he acknowledged that he was wrong and we were right. Under such a teacher parsing was fun. I can

\* *The Idea of a University*: Preface, p. xix.



hardly overestimate his instruction : what we were fit to learn he taught us ; and, best of all, he taught us how to teach.

Life among cultivated people may give a boy ready and winning speech, a sense of style, and a sort of intuitive accuracy ; but all this is not enough, even for the few whose privilege it is. Again and again I have seen the untrained youth, however cultivated for his years, flinch before every searching test. So long as he does not stop to think, his writing is presentable ; ask him to think, and his mind lies down in despair. Yet if he is ever to express anything more complex than a fleeting impression, he must learn to think ; and the sooner he begins to learn, the better his thinking will be. Early training, then, — drill in the laws of the structure of sentences, — I regard as of prime importance. Through this a teacher may rapidly develop the thinking power of his pupils. Show a boy how reasons lie behind rules, — reasons born of blunders now and then, but reasons still ; rouse his faculties by revealing the human side of grammar. Teach him as many of the reasons as he can understand, urging him always to look for them first himself. Tell him why *shall* means one thing and *will* another ; why it is not well to use *and* before *which* unless another *which* precedes. Save the rules from being matters of memory alone.

Not that the cultivation of memory should, in children, be subordinate to anything ; but that it should nearly always be combined with something. Poetry, for instance, a child may learn by heart years before he can understand it ; because poetry, even unintelligently learned, does more than train the memory. It wakens the sense of rhythm, makes new words familiar, rouses imagination. The rules of grammar, however, if learned unintelligently, benumb the mind ; they must be intelligently mastered if they would quicken it. It is poor training for the memory, to give it nothing worth remembering. Some candidates for admission to Harvard College have memories that serve merely to expose their darkling incompetency.

Much of the preparation for the " sentence paper " may and should be done in the correction of the boy's own writing. The pupil should be made to recast every ungrammatical sentence, and to give a reason for every change in choice or in order of words.

I believe that at most of our schools the criticism of themes is miserably inadequate. My belief rests partly on *a priori* grounds. In small schools, one man teaches many subjects, — his professorship, as

Dr. Holmes would say, is not a chair but a settee, — so that even if his pupils are few, he has not time to give them in any one subject such close personal attention as English composition should claim. Large schools often devote a whole teacher to English, — a whole teacher, working five hours a day in the class-room, teaching a hundred lively boys, and doing divers odd jobs such as every school expects. What with preparation of lessons, and the exhaustion that follows vigorous teaching, he has few working hours out of school. Indeed, one of the best teachers in the country tells me that, of his five hours *in* school, only one sees him at his best. It need not be the first hour, — he may save himself; but before it his work is deliberately perfunctory, and after it inevitably so. Into that hour goes the freshness of the day. The rest of his teaching is mechanically good, not vividly good.

Suppose a teacher has a hundred pupils, each writing one theme a fortnight. If the themes are four pages long, he cannot, weary as he is, mark carefully more than three in an hour. He thus needs fifteen or twenty hours a week for written criticism alone. Discussion of the criticism with the writers individually, — a highly important part of the work, and, by the way, the most exhausting part, — demands about five hours more; so that, all together, if he is to teach composition well, he must devote to the teaching twenty or twenty-five hours besides the time that he spends with the class. Yet for this extra work his employers, in all likelihood, make no provision, — and his head makes no provision. It is no fault of his if he grows dry; for nothing desiccates a man quicker than reading themes.

Moreover, to mark themes well, a man should have some leisure. He must cultivate himself, do something beside “shop-work,” read literature to offset the effect of themes, counteract rapid evaporation by no less rapid infusion of something beautiful and inspiring. All this takes time, — and freshness too. The jaded theme-reader is past inspiration.

Yet theme-reading is interesting. No man to whom it is not, no man who cannot do it with enthusiasm, has a right to undertake it, — as, in general, no man who cannot drudge with enthusiasm has a right to be a teacher. Theme-reading is interesting, if the reader is not worked like a factory-hand, till his very soul is numb.

Thus far my reasoning is *a priori*, as I have said, but it is supported by painful signs. Everywhere we see teachers who are, as the cabman said of his horse, “staying with us, but not living;” teach-

ers whose bones are marrowless, whose blood is cold, whose only life is in their nerves; teachers with aching heads and ruined digestions and shrunken faces — steadfastly evaporating for a thankless public. How can their work inspire a warm-blooded boy? How can it be good work, when its motive power is no longer mental elasticity but a suicidal conscience?

Other teachers we see who are discreet enough to live though they crowd theme-reading to the wall. They do what they are paid for, and do it well; but in teaching composition they cannot be said to do good work, since they do none. There are good teachers of English in our preparatory schools; there are others who would be good if they had time: but as yet few educators begin to recognize, either with mind or with money, the just demands of English composition; and where composition is neglected, correction is ignored.

I once saw a number of themes from a school that is at least the equal of any in the country. These themes had been read and marked. On the outside of each was a diagram drawn by the boy and containing the words *Penmanship*, *Spelling*, *Punctuation*, and — I think — *Composition*, with a blank opposite each word. Each category had its maximum figure; and the sum of the maxima was one hundred. The teacher filled the blanks with marks, added these marks together, and thus gave the boy a percentage. The themes may have been discussed in the class; but so far as written criticism is concerned, they might almost as well have been let alone. Whatever the teacher put on them, beyond the figures, was infinitely small, and — as geometry teaches — might be neglected.

One theme was sent to me as a specimen of the best work in the school. The writer had taken a formidable subject and had wrestled with it manfully. Yet though his theme was remarkably long, a few commas in the text and two or three words in the margin were almost all the guidance that he got from the instructor. He lost three or four marks, — for punctuation, I believe; but the instructor added to his score a well-earned bonus for general excellence, and marked the theme *one hundred*.

Having secured permission to criticise this theme, I spent an hour or two upon it, trying to point out both its faults and its merits. The boy had done so much that it was a shame to see his teacher doing so little. There were a hundred things to say about the composition; and the boy, by the strong intelligence of his work, showed himself able to apply them all. Yet it was nobody's business to examine his writing minutely. Nobody had time for him.

Make a boy test severely every sentence of his theme, and make him rewrite every sentence that does not stand the test; then the "sentence paper" will be easy to him: but so long as you have no time to drill him in correcting his own English, he will be ill-prepared to correct the English of others.

Of text-books I know little. Few that I have seen commend themselves to me; and some induce dejection bordering on rhetorical agnosticism. The best of them are, as a rule, unfit for young minds; and the worst, for any minds. To meet the needs of beginners, Professor A. S. Hill is writing a little book midway between a grammar and a rhetoric; and this is sure to be good. Mr. Strang's "Exercises in English" (with the ominous heading, "*Exercises in False Syntax*") will prove purifying if taken in small doses; and, for teachers, Dr. Hodgson's Manual, clumsy and fastidious though it is, cannot fail to be of service. At present, however, the crying need is not of text-books, but of good teachers with fair play.

It is easy, I know, to say how people ought to teach, and fearfully hard to teach. Just now the College asks of the preparatory teacher nothing but taste, common-sense, and enthusiastic drudgery. Of his employers it asks more. "Better the condition of the preparatory teacher," it says. "Do not put on him a load that will break his back unless he pitches it off. Remember, too, that you can get ten teachers of Greek or Latin to one teacher of English, since the market affords ten times as much learning as common-sense. Pick your teachers carefully; then let them have elbow-room, and vitality enough to use their elbows."

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In conclusion, I would speak my convictions once more. The examination in the correction of bad English is a valuable test of acuteness and accuracy. Preparation for it calls for early and intimate knowledge of the groundwork of English grammar; for continuous effort to apply that knowledge rationally; for long practice in writing, under faithful supervision: above all, for a teacher, not overworked, who commands the respect alike of pupils and of colleagues,—for a man or woman, learned or unlearned, with a clear head, an enduring conscience, an elastic enthusiasm, and uncommon common-sense.



## *BOTANY IN THE HIGH SCHOOL.\**

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IN what is to follow, we are likely to travel together, for some distance at least, over the old ground and listen once more to the familiar ideas that have come to wear the visage of well-known and long-tried friends. But we should miss them if they ceased to put in an appearance at the Schoolmasters' Club, and since they are sure to come, it is, perhaps, an act of charity to introduce them in the morning and in the springtime, with whatever appearance of freshness they may be induced for a brief season to put on.

It is assumed that the teacher of Botany in a high school, in common with every real teacher of whatever subject, is aiming first of all to make the most of his students in every way, and is using his subject simply as a means of accomplishing this. He finds his classes made up, in great part at least, of young people who do not know how to see things just as they are, or how to express their conception of what they do see, or how to form a correct judgment about facts, or how to use books properly: in short, they are untrained and uneducated, and he has set out to do his part, with the rest, in training and educating them.

His object, then, is substantially the same as that of his fellow-teachers, but he has a subject to teach that is different in various respects from theirs, one that will necessitate different treatment and very likely some methods not in use in other branches.

He will perhaps try in the first place to see whether any kind of training can be secured by the proper study of Botany that is not readily attained in the study of other subjects, but he will by all means try to ascertain whether and how the work of the same pupils in other directions may be stimulated and strengthened by their work in this.

This, it would seem, is the only fitting and right attitude to take, and it may be stated at the outset that the University requirement in Botany has been made not so much with the thought of making a place for a subject that may or may not in itself be of sufficient impor-

\* Read before the Michigan Schoolmasters' Club, May 24, 1890.

tance to warrant it, as it has been to introduce what, aside from its own peculiar educational value, is believed to be capable of reinforcing in various ways the work in other subjects.

Now the study of Botany will hardly be employed, directly and specifically, for the purpose of training the memory. The languages, in certain ways at least, give much greater opportunity to develop this faculty. Yet even here, the study of this science may be made to serve an auxiliary purpose by training the memory in quite a different way. Whoever studies a single plant so carefully and minutely that he can always thereafter faithfully describe from memory its mode of branching, the form of its leaves, the peculiarities of its flowers and other external or structural details, has had his memory trained, though not in just the way it is trained while he is learning the verbs in  $\mu\mu$ . Both these ways of exercising the memory are certainly useful; it may be difficult to say, offhand, which is the more useful.

Again, we do not think of Botany as preëminently a means of training the logical faculty. Mathematics is understood to be the special subject by means of which the reasoning powers are to be developed. And yet in a most important respect, the study of Botany may be made to supplement that of Mathematics. The student has just been occupied, we will imagine, with an exercise in Geometry. He has proven absolutely and beyond all peradventure that the areas of similar triangles are to each other as the squares of their homologous sides. The proposition admits of no debate, and whoever does not accept the conclusion "is not of sound mind and we cannot reason with him," etc. He goes into the class in Botany and proceeds to ascertain whether the plant that has been brought in for study is a *Thalictrum* or an *Anemone*. It looks just like a *Thalictrum*, but closer examination makes it apparent that it has certain characteristics that belong to the *Anemone*. He is not a little perplexed, and if he goes far enough with the investigation he finds that the botanists themselves have already shared his trouble. Finally a compromise is made, the new manual clears up the difficulty, and to the relief of the teacher, if not of the student, one more vexed subject of discussion is disposed of.

This is perhaps an extreme case, and it is readily admitted that such exercises might prove a stumbling-block and nothing more, but in the hands of a skilful teacher how strongly the impression is made that a large body of scientific truth is to be acquired by other than mathematical processes, and what is more, by the repetition of such exercises, the pupil really learns to acquire scientific truth by these other

roads. He is constantly called upon to exercise his judgment, and, furthermore, he comes at last to recognize the fact that there are differences of opinion between the highest authorities and that there are certain questions that may never be settled, and must, for aught we know, continue to be held in abeyance for an indefinite time. It is, perhaps, just as important for the average member of society to learn to use his judgment in this way and to learn that there are and always will be differences of judgment, as it is to have his reasoning powers trained by the use of mathematical demonstrations. Both are of the utmost value, and, as already said, it is hard to tell which kind of training is most important.

It has for many years been sought to secure as far as may be the right use of the mother tongue by the study of English in the High Schools. The critical study of the English classics, the writing of essays, and the various other kinds of exercises that have made, in some schools at least, the study of English a liberal education in itself, cannot find any substitute, nor is it easy to conceive of any one's seriously offering anything to take its place; but other subjects may well be taught in such a way as to reinforce the work done in the more direct study of English, and Botany is perhaps one of the very best adapted to become such an auxiliary. The really scientific description of the organs, structure, and habits of flowering plants is rarely attained except as the result of long and careful training, and the teacher of Botany, by looking carefully after the descriptions written by his pupils, is able to give them a large amount of such training. It is certainly his business to impress the cardinal truth that whoever has occasion to write a scientific description has no right to leave it in any other than accurate, clear, and concise form, and in so far as he succeeds in doing this, he is making the study of Botany an aid to the right use of the English language.

The value of Botany as a means of developing the power of observation has so often been set forth and is so universally acknowledged that it is superfluous to enlarge upon it here. Bearing in mind its great educational value in this direction, the teacher will endeavor to attain, by every means in his power, the results which it, of all subjects in the High School course, seems best adapted to secure. He will hardly set his pupils, first thing, to studying charts or learning lessons from some text-book; instead of this, he will see that they do actually study plants, and he will do this in spite of difficulties of all sorts, and in spite of the fact that it takes an endless amount of

time, and having once adopted this better way, he will hold to it as the one way by which to accomplish the end in view.

Some such purpose as this, it may fairly be assumed, ought to be held by those who are called upon to teach Botany in the High School — to teach it so that the memory will be trained to hold firmly facts of form, structure, and relationship, so that the judgment will be developed, so that it will aid in the acquisition of a clear, direct and accurate use of the English language, and so that the eye will be taught to see “what is” *as it is*.

It may be doubted whether any teacher can tell another just how to do all this. It is *not* to be accomplished exclusively along any one of the lines that many of us have travelled — as, for example, by learning Gray’s Lessons by heart, or analyzing “fifty species of phanerogams” (the University Calendar notwithstanding), or by filling out the blanks in some “Plant Analysis,” or by getting a lot of microscopes and filling the class with the notion that the old botany is all wrong; but it can be done just as soon as the teacher himself learns to observe independently, just as soon as he knows how to study a plant without running first to a book to be told what to see. When he has reached this stage in his own habits of scientific work, he will be able to help others to work in the same way, and until that time, to state the case mildly, he ought not to teach Botany in a High School or elsewhere.

It will not, it is hoped, be thought an ungracious or exaggerated statement to say that those who spend seven or eight years of preparatory and college work upon the other subjects taught in the High School can hardly expect in as many weeks to become fully prepared to teach Botany. Just now there is quite a demand for summer schools to enable those who have no special preparation for teaching this science to “get up” a certain amount of it, enough to pull through another school year. There are certain teachers to whom it does seem very desirable to offer even this meagre help, but it is at least a question whether it will not be better in the long run to refuse it altogether and to emphasize the exact truth that the subject is not to be taught well without special training on the part of the teacher, and this training is not readily secured by devoting four or five hot weeks in July and August to Botany along with two or three other sciences.

There are a few questions that keep coming from various quarters, some of them from regions far beyond the scene of activity of any of our Michigan schoolmasters, and perhaps the attempt may as well be made here and now to answer or partly answer some of them.



One of these is, "How about that requirement for admission? what do you really expect to have students do who are coming to the University?" Once for all — the requirement as it stands in the University Calendar is simply a means of making sure that a reasonable amount of time — not less than half a year — has been spent in the direct study of plants. It is impossible for a pupil to actually study and describe fifty species of plants without, in some degree, getting his eyes opened. He will learn something (as our good Professor Olney used to say) in spite of his teachers, even if they attempt to teach him as Aristotle himself might have done, how plants ought to be made, instead of looking to see whether they are made so or not.

One is perplexed not a little by the constantly recurring question "what text-book would you recommend?" The reply so far has been, "I do not know of any to recommend without reservation," and what is more, it is doubtful if any book is likely to appear very soon that will meet the wants of those who raise this inquiry. There is no book that will make it easy to teach Botany. Whoever has tried to teach the subject by making the learning of Gray's Lessons the main part of the work, or, worse still, has set his class to learning Bessey's Botany by heart, has found out the dreary dissatisfaction of it and does not need to be told how very dry such botanizing is. Possibly, though, the very fact that no text-book has appeared, as yet, that really seems to meet this "long-felt want," is a blessing in disguise, for it has certainly driven more than one teacher beyond and outside of the book. The laboratory guide to practical Botany, suited to the wants of the average High School class, is apparently yet to be written.

We are not in immediate need of any more "Plant Records" or "Plant Analyses." Authors of every grade, from High School teachers in the far west up to college presidents in the far east, continue to blossom out in this form of contributions, and it is to be feared that for some time to come their own unfortunate pupils, if no others, will go on trying to ascertain the mode of dehiscence of the dandelion and possibly the placentation of its ovules, in order not to leave too many blank spaces unfilled. A clean blank-book or sheets of good unruled paper are much more likely to assist in developing genuine, independent work than all these boxes in which the vegetable kingdom, previously cut and dried, is to be packed away beyond all hope of resurrection or recognition.

"Is it desirable to fit up in the High School a laboratory with microscopes and undertake the study of minute structure and the lower

forms of life?" Yes and no. If the teacher has had full preparation in that line of work, is enthusiastic in it, and can accomplish more with his students in that way, by all means go at it that way; it is easier than the other. I mean to say that it takes less skill to secure really good results if one has such an outfit, than if he has to go to work without it. But placing a compound microscope between the eye and the object does not necessarily make a good observer, and unless the teacher knows, to start with, what he is going to do with such instruments, he may as well not urge his Board to purchase them.

There seem to be certain practical reasons for encouraging in most of our High Schools the study of plants in the more direct and simple fashion. Those who take a college course will have an opportunity later for the study of anatomy and life-history, or, in general, what now commonly goes under the name of biological work; and those who take no higher course of study are perhaps just as well off if they have learned to use their own eyes, as they are if they have learned to see everything magnified. It is not possible to get both of these kinds of work done well, unless a year or more is given to the subject, and it need not to be said that it is preferable to do one thing well rather than two things poorly. Of course the excellent work that has been done for years in the way of elementary Biology in a few of our schools is worthy of all encouragement, and, as far as the University is concerned, this encouragement is and will continue to be given by the acceptance of such work as fulfilling the requirement for admission, and even in cases of special excellence, by giving advanced credit where such credit appears to have been fairly earned.

One more question naturally suggests itself: "Does either of the lines of work that have been considered really cover the ground that it might reasonably be expected an intelligent class in a good High School ought to cover? Is it not a very limited and, perhaps, one-sided view of the science of Botany that is to be attained by such a course as has been suggested?" Perhaps it is a sufficient answer to say that after a student has spent a much longer time upon the subject than can be given to it in any preparatory course, precisely the same question might be asked and the same answer implied. Even after years of work in any modern science, we are all of us still at the threshold, still laying foundations. Why should we continually struggle after the impossible? Our students cannot in six months gain the comprehensive view that is only to be best attained by years of reading and research, and it would seem to be the part of wisdom to

help them to see clearly a part, rather than give them a hazy glimpse, like a view in dreamland, of the whole. If it is thought best, as it probably will be in the majority of schools, to study systematic Botany without introducing the use of the compound microscope, it is certainly practicable in the course of half a year, for any class of good ability to learn how to write a scientific description, to be able to delineate structural details with the pencil, and to acquire a reasonably clear and comprehensive knowledge of the general facts of structure and habit, and the principles of classification. This is a good attainment in itself, and this is exactly what is aimed at in the few words that for years have stood as the University requirement in Botany. If, on the other hand, it has been decided, in the comparatively few schools that are likely to secure the necessary outfit, to take up the study of the lower plants and vegetable histology, the teacher will find this department of Botany sufficiently extensive to engross all the time at his disposal, without attempting to cover other divisions of the subject.

It is to be hoped that nothing that has been said will be construed into acquiescence with the prevalent impression that Botany can be taught just as well with little or nothing to work with. The teachers have "got along," it is true, for many years, and have managed, somehow, to produce results, but the practical laboratory appliances for the study of this subject are disgracefully behind what they are in other sciences. I mean the appliances merely for the ordinary study of flowering plants, with no reference to the more expensive equipment for microscopic work. Go into the great schools of Grand Rapids and Ann Arbor, with their special laboratories for the study of the physical sciences. There are the teachers of Botany working in an ordinary recitation room, some of the pupils twenty to thirty feet, or more, from a window, not a single laboratory table, the lenses, tenaculum, herbarium paper, and other necessary outfit, purchased partly by the student and partly by the teacher, the whole affair giving at once the impression that, while the other sciences have at last struggled into recognition and are finally, in at least a few schools, properly equipped, Botany and its teachers have been left absolutely to themselves, to live or die, according to the law of the survival of the fittest. That there has been a vigorous survival is due to the determination of the teachers and not to the environment.

Suppose, now, that the simplest possible outfit were provided, so that systematic Botany could be taught in such a school as the Ann

Arbor High School, say, without the teacher feeling hampered at every turn by the lack of what is really essential. The following would perhaps include the most necessary items :

1. Plain laboratory tables, of hard wood, oiled, not varnished, provided with drawers, and placed in such a position that each pupil will receive as much light as possible without getting into direct sunlight. These tables, with chairs, take the place of the ordinary recitation seats.

This is of great importance. If the room is fitted up as a recitation room, it is used as such in nine cases out of ten ; if it is fitted up as a laboratory, the surroundings at once become a powerful influence in the right direction. It ought to be the very first move on the part of the teacher to get hold of a well lighted room, with plain, solid tables, and not a single recitation bench.

2. A stock of glass-ware of various kinds, wide-mouthed bottles, large jars for aquaria, bell-jars and other things of the kind, is in constant use and ought to be provided. The city of Detroit at present has the teacher furnish these out of her own pocket.

3. A good dust-proof case, of rather large size, will be needed to hold these articles, and a compartment of this or, better, a separate case, provided for the herbarium.

4. Dissecting microscopes, or lenses suitably mounted. These are too expensive for the pupils to furnish, or, at any rate, to be required to purchase, and ought to be provided by the School Board.

5. Herbarium paper, genus covers, plant-press and driers, or, in short, the usual plain outfit for an herbarium, which the classes ought to be encouraged to form, so that the school may gradually build up a reference herbarium of its own. If this were done, we should soon have in these collections exceedingly valuable data for a more thorough study of the distribution of Michigan plants than has yet been made, a result that alone would much more than warrant the outlay.

6. A tight box, zinc-lined, for keeping plants fresh, similar smaller open boxes for window-gardens, a pair of scales, a set of wall charts, and last, but by no means least, two or three dozen works of reference, and a live journal, like the *Botanical Gazette*, complete the list.

Now think of this much really being provided. It would take perhaps \$250 to start with and \$25 every year thereafter. How utterly surprised the teachers of Botany throughout this state would be to actually find themselves in possession of all this ! Bless their souls, they don't



expect anything! The men teach Physics and Chemistry and get the lion's share of all the appropriations. To the honor of one teacher of physical science, the worthy president of this organization, be it said that he has, at least on one occasion that has come to the writer's knowledge, offered to share with the teacher of Botany, and actually helped her to get things that she could not get alone.

There are some other questions that might be raised, such as those with reference to the best time of year for the course in Botany, the grade to which it seems best adapted, and so forth. Without entering into these, it may be said that the practice of giving half a year to this study, beginning in the third term of the tenth grade and continuing for a few weeks in the following fall term, appears to be an excellent arrangement. It offers a good opportunity to those who become interested to use a portion of their vacation in more independent study out of doors. This plan has been adopted in a good number of schools, and commends itself in every way. These and other practical aspects of the subject, however, may well be left to the schools to work out in their own way.

In conclusion, it ought, perhaps, to be said that the extension of the requirement for admission in Botany to the Classical and Latin courses has been made in the face of acknowledged failure, on the part of at least one great university, to obtain satisfactory results from any entrance requirement of this kind. It was because here, at this university, we had faith in the teachers of the state that the requirement was extended, and there is no reason, as yet, to believe that any mistake was made in asking them to undertake still more of the difficult but, after all, hopeful and inspiring work of starting the boys and girls of Michigan in the study of living things, the greatest study with which the mind of man has grappled.

## ARE COLLEGES REQUIRING TOO MUCH FOR ADMISSION?

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O. B. RHODES, ADAMS, N. Y.

ARE colleges requiring too much for admission? is a question that springs from the now conceded fact that the period of education from the secondary school to the end of the college course is too long for the practical man of affairs, or for one who must still complete a professional course of study. It is claimed also that it is too long as compared with that of the German or French schools. President Eliot of Harvard, in an admirable paper published in the *Atlantic Monthly* for August, 1888,\* is authority for the statement that the average college student is nearly twenty-three at graduation, and that the elaborately educated professional graduate cannot support himself until he is twenty-seven or twenty-eight years old. This makes a heavy burden upon all except wealthy parents, and a still heavier burden upon poor students who partially or wholly support themselves, prolonging for them the period of education beyond the average limit, and postponing by so much their time of entering upon a professional life.

The increased requirements for admission to colleges made in the last few years undoubtedly added a year to this period of education, already too long from this practical point of view. But the favor with which these requirements were met would seem to show that the need was felt, and that the movement was not a false step, but the natural result of a true process of evolution in American education. Harvard led the way in these additions to the preparatory course of study, and she now leads the way in protesting against the length of time consumed in the entire period of education. To shorten by a year the very course which has been lengthened that much would be to acknowledge a *faux pas*, and to beat a retreat, leaving the preparatory course where it was a few years ago. The recent plan for shortening the course of study at Harvard submitted to the Board of Overseers by the faculty would seem to encourage the anticipation of college studies by students at the time of their admission, and to facilitate the attainment of the degree of Bachelor of Arts in less than four years. This implies that even more can be accomplished by students in the

\* Can School Programmes be Shortened and Enriched ?

preparatory course whose average age at entrance into Harvard has reached what President Eliot regards as the "extravagant limit of eighteen years and ten months."

"They order this matter better in France," said Sterne in "The Sentimental Journey," and this is what we have been hearing of late from every quarter in regard to education. In Germany the course is still more comprehensive, elaborate and difficult. President Adams of Cornell University says that in comparison with the American, his "fellow-student in Europe, equally well trained, and even more thoroughly prepared, is able to begin his professional practice at twenty-two." He must then leave home for the university at the average age of eighteen, a year earlier than the average American youth who graduates from college at twenty-three. President Eliot prefers to compare the French boy with the American because politically, socially and industrially France and the United States closely resemble each other. The comparison is decidedly to the disadvantage of the American boy and his course of secondary instruction, even in the best schools of the Athens of America. The French course is more serious, more substantial, more stimulating, and requires greater exertion on the part of the pupil than the Boston. If we seek for some natural advantage of the French lad over the American we fail to find it. "The French boy," says President Eliot, "has no possible advantage over the American boy in strength of constitution, intelligence or endurance; on the contrary, he is not so large a boy as the American, on the average, and he is not so well fed." If this is true, and the French boy really accomplishes more than the American in the same course of study, we must indeed confess that "they order this matter better in France," and that colleges are not requiring too much for admission.

The comparison of the American boy of the same age and a similar course of study with the German boy is just as decidedly in favor of the latter. For Principal Payson told us last year, in his excellent paper on "Economy of Time in Common Schools," that "the ordinary German gymnasium boy of fourteen or fifteen has accomplished a great deal more intellectual work than his American contemporary." And we might add more than his French contemporary, for President Eliot, in the paper referred to, selects the French national programme for study rather than that of a German gymnasium, "because the work done in German secondary schools is more comprehensive, elaborate and difficult." Of the acquirements of the German boy Principal Payson says the American boy "would stand aghast at such erudition, and

would probably regard his German friend as some extraordinary being to be approached with awe and handled with care." Something of this sense of awe might well steal over the American teacher also, for Mr. Walter Gerould in the *JUNE ACADEMY* has just told us that he has seen boys "thus trained, at the age of twenty, in the University of Berlin, leave full-fledged professors from this country completely discomfited and unable to follow their brilliant work. Verily we are obliged to confess that they order this matter better in France than in America, and better in Germany than in France. For their youth accomplish more in the same courses of study at an earlier age, and, what is more, they have acquired a far better knowledge of their own language and literature, and the modern languages, than the American boy ever gets. Neither can we discover any natural advantage over him unless it be that the French boy eats less, and the German boy drinks more. From this comparison we are forced to the conclusion that colleges are not requiring too much for admission. Theoretically, there is apparent no reason why the American boy should not at an earlier age than at present accomplish the work of our preparatory course for college, which is less than that required in European programmes.

But practically, there is after all a wide difference in conditions. Our education must be American, adapted to our conditions and necessities, and must be naturally evolved from them, not imported from abroad. How far the superior results of instruction in France and Germany are due to better teachers, greater incentives, and to the more perfect unity of the entire system of education we cannot compute. Neither do the advocates of the adoption of the German system, at least, consider fully the wide difference between the relations of the government to the entire system of education in Germany and in our own country. There the hand of national authority, paternalism, or regimentation, as Professor Huxley calls it, is everywhere felt, and is in marked contrast to the individualism and lack of unity and authority in the American system. In France, too, Matthew Arnold tells us that, in answer to the question, "Who gives you all these fine things?" the child is taught to say, "The State." A lack of harmony and unity in the entire system of American education, from the common school to the university, is apparently the chief cause of so much waste of time and effort. Many schools that are obliged to do preparatory work are limited on all sides. They are imperfectly equipped, inadequately endowed, feebly sustained, and parsimoniously helped by the state.



But the worst limitation of the preparatory schools is in the age and conditions under which pupils take up the preparatory course of study. The average age of students entering Exeter is sixteen and one half, a year lower than the average age of a hundred academic students holding the preliminary certificate, in a fairly good academy, in the state of New York. The conditions of admission are practically the same: "Some knowledge of common school arithmetic, writing, spelling, and of the elements of English grammar." Of these requirements President Eliot says that they might reasonably be made of a boy leaving the primary school at eight. If in the righteous judgment of a great educator Exeter scarcely be saved where shall the great mass of preparatory schools appear? They are simply compelled, like Exeter, to take the student as he presents himself, and, unlike Exeter, to carry him, along to the detriment of the few who might easily be ready for college at the age of seventeen.

Under these severe limitations the question, Are colleges requiring too much for admission? becomes more difficult to answer. Theoretically, the work can and ought to be done even at an earlier age than the present average. Practically, it cannot, except for picked boys and the favored few. Shall we beat a retreat, or maintain the advanced requirements which have met a felt need, until these unfavorable limitations are removed? It is of more importance to American education that the limitations be reduced and removed than that the present standard of admission to college be lowered. So much has been done in recent years to improve primary and early secondary education in New York that we have every reason to believe that at no distant date the average age of admission to college may be reduced from nineteen to seventeen and the work be even better done than it is at present.

To secure this result there is need (1) of better primary and secondary instruction, and a more complete unification of the entire system of education. This need will not be felt unless the incentive of a worthy ideal be kindled in the minds of preparatory teachers and pupils, and the value of such an ideal in a democracy is very great. "For it is one of the prime weaknesses of a democracy," says Lowell, "to be satisfied with the second-best, if it appear to answer the purpose tolerably well, and to be cheaper — as it never is in the long run."

(2) We must be freed from our perverse and wicked devotion to that old fetich of the common school, common English studies. We are slaves to arithmetic, geography and grammar," says Principal Pay-

son. The French boy devotes to arithmetic only one-third of the time the American boy devotes: "Yet for practical purposes the French are quite as skillful with numbers as the American," says President Eliot. We want more mental arithmetic, and less arithmetical puzzles, and the student brought earlier to geometry and algebra. In grammar we want more language and literature and less logical analysis and word-mongering, a larger vocabulary and more and better ideas, which an earlier acquaintance with good literature implies. Curtius, in his *History of Greece*, says of the Greek boy that "When he had learned to read and write, he read the poets: he learnt to declaim them, and with the words appropriated to himself the wealth of their subject matter. Reason and feeling, taste and judgment, were developed by his habituating himself more and more to the ideas of poets of high and universal reputation." Something of this ought to be implied in language study in America, as it is in France and Germany. The paucity of ideas in the common English studies to develop reason and feeling, taste and judgment, is one cause of the inability of the student to take up the preparatory course with an intelligent interest. As President Eliot tersely puts it, "There is not enough meat in the diet." In geography there should be a rigid pruning of non-essentials, and a closer connection made of the subject as a culture study with history, literature and life. Our uncommonly common English course needs vivifying with ideas to maintain interest, and to carry the pupil along without weariness by the inspiration of the subject-matter and the consciousness of progress. It needs not so much multiplicity of knowledge as the simplicity of a better, more vital, more serious, more profound knowledge, which shall lift it out of its Philistine rut of the common, into the more stimulating course of the uncommon, where the youthful mind may run and not be weary, may walk and not faint.

(3) We must sacrifice another fetich in education, both primary and secondary, the hard and fast line of percentage marks. The letter killeth here as elsewhere. Mechanical courses, teaching, examinations, marks, and much writing tend to mechanical results. Flexibility of mind is lost sight of, and rigidity of mind is the outcome of what President Eliot calls "an exaggerated and wholly unnatural accuracy of attainment." And flexibility of mind is just what is needed to begin the preparatory course and to complete it with that stimulus of personal interest which comes from contact with profound and beautiful ideas of high and universal reputation, ideas which still appeal to reason and feeling, taste and judgment, ideas too often obscured by

aiming at "an exaggerated and wholly unnatural accuracy of attainment."

(4) While the preparatory course does not include too much, and can be completed with credit by picked students at the age of seventeen, the limitations of many schools and students ought not to be overlooked. Great progress has been made, and we are capable of still greater. "We do not propose," says Emerson, "to make a statue out of punk." But there is a vast amount of punk in human nature to be rejected, or worked up into something better. A high ideal for the young is of immense importance, and the school needs the present requirements. But a wise consideration, and possibly modification, of the tests of progress in studies will undoubtedly continue to be made as experience suggests. The chief difficulties in the preparatory course are in Caesar and in Latin and Greek Composition so-called. They lack the stimulus of ideas which make the wealth of subject-matter in other studies. Too much time is required to pass these subjects, and it may fairly be questioned whether, in the present condition of educational matters, they are worth the time that must be given to them. Somewhat less of Caesar, in amount, with easy examinations, and something more certain and definite in Latin and Greek composition, would perhaps abridge the time required for preparation without lowering the true idea of classical study.

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### *HASTE AND WORRY IN TEACHING.*

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THIS subject was discussed at the April meeting of the Massachusetts High School Teachers' Association apropos of a paper by Miss Ellen M. Haskell of the Worcester Normal School. Miss Haskell notably represents a school from which haste and worry have been altogether eliminated. Mr. Russell, the principal of the Worcester school, has from the beginning of his administration held it to be of the first importance to secure for his pupils and for his assistant teachers the most favorable mental and physical conditions. To accomplish this result he has introduced features which make the school unique among large schools of the secondary grade and render it a peculiarly interesting study to teachers of such schools.

For one thing, as Miss Haskell showed, the *tyranny of the programme* has been abolished. This does not mean, of course, that the programme is abolished. A programme of daily work, to coordinate the many departments, there must be. But in the Worcester school the programme is not regarded as a machine that *must go* during the prescribed hours. The school is more than the programme, and something else than the programme is often the best thing for the school. Occasions for stopping the programme and doing something else were described as of frequent occurrence. For instance, no school programme of work can provide for the admonitions of a social, moral, or religious nature which are usually in place only at some moment when fit occasion has arisen that predisposes minds to attend eagerly and to understand thoroughly. The good teacher seeks to utilize the chance opportunities of school life. But a programme of regular hours and bells and marchings and filings is remorseless, as usually carried into practice, allowing no waiting even for a moment, breaking in sunder the most impressive lessons, and necessitating, in many cases, that most ridiculous and characteristic school procedure, — a required interview *after school*.

It often happens also that lessons other than admonitory ones can best be given when, in some unexpected manner, they create their own opportunity and must be intercalated in other affairs. Thus the phenomena of the weather and of the advancing seasons, social, literary and educational events, often preoccupy momentarily all minds in the school-room and suggest that the prevailing interest be utilized for profitable lessons.

It seemed from Miss Haskell's account that these suspensions of the programme are not only frequent but sometimes of considerable duration. Evidently the habitual frame of mind throughout the school is one of complete indifference as to whether the programme or some other thing is going forward. Something is sure to be going forward that is deemed at that time to make for the end in view more largely and directly than the routine would.

Our readers will have concluded that the mood of the Worcester school is very unlike that which prevails in most institutions of upper grade. The common note of public high schools is push, enterprise, anxiety to reach an appointed goal, and worry lest the term's achievement fall short of some high-water mark. And this is almost inevitably the case where the supervision prescribes a definite amount of measurable work that must be done by a given date. We learned from



Miss Haskell that no such prescription exists for the school at Worcester. This is at the outset enough to account for the ease with which the programme is made flexible and auxiliary rather than hard and tyrannical. Given a system of final examinations anticipated to be searching and decisive of important interests, and no pedagogic skill or personal magnetism will avail to keep out nervous worry and overpressure from the year's work. A programme easily becomes a fetich when every departure from it means abridgment of the precious time for preparing for a set of examinations.

One modern tendency in education to which parents, teachers and boards of trustees agree in yielding unaccountable homage, but which Mr. Russell has recognized as vicious and has opposed with the most satisfactory results, is the constant straining to shorten the school year and the school day. In one large technical school the summer vacation lasts from the first of May to the end of September. In the remaining months of the year is crowded work that all considerations of mental and physical hygiene require should have a much longer time. The teachers of such a school have and use the opportunity to earn a second annual salary. For the young men of course work cannot begin too late or cease too early. In public high schools it is an almost universal custom to have one short daily session which ends at one or two o'clock. In this short session the work must be hurried to make both ends meet. Pupils carry home great numbers of books, for a period of home study lasting not infrequently three or four hours is an unavoidable feature of the system. The mid-day meal is either omitted or is replaced with hurriedly eaten lunch, closely following which comes renewed mental strain. The situation is about as bad as can well be conceived. The health of teachers suffers, but apparently it does not suffer enough to move the sufferers to united agitation for better hours. The delights of early dismissal for the day have a charm for young and old. In no great European schools is such an evil, so easily remediable, tolerated.

Neither is it tolerated in the Worcester Normal School. The daily session there is exemplarily long. It lasts the entire day. At noon the recreation period is long enough for leisurely eating and for subsequent mental repose. A pleasant lunch-room is provided, where the pupils are not under supervision. Perfect arrangements for warming food and drink are provided. The study periods are long and tranquil. There is no need of carrying home work.

As for the teachers under such a regime, neither do they carry home

work. Even the English teacher carries home no work. The teachers are expected to give the public that employs them their entire working day, but not their evenings. This entire working day however is not at all a day of continuous mental effort of the same unvaried kind. Much of it is spent in solitude, and even that portion which is spent in the class-room has the note of tranquillity and ease.

In high schools generally the four or five hours of session are so exhausting to teachers that when the session ends they positively must get relief at once, in order to proceed in the evening to the work for which there was no time at school.

Miss Haskell's paper was a plea for such mental, moral and physical hygienic conditions as should make school education most effective. It would have been impossible to interpret her argument as making for less vigor or less thoroughness in work. If one has a long journey to make a-foot, it is not best to be seen running and puffing and wiping away the perspiration at any stage of its progress. Even if the sole object of a course of study were simply to achieve it all and get a certificate of having done so, yet even then it would be wise to move along with even gait, undisturbed by anxiety. But in a course of study the main thing is not to get it somehow, — to get it *quand même*. *How* the course is accomplished is the all-important question. For the material content of the course will soon vanish from pupils' possession after examination: but the mental habits acquired in the course remain; the tastes formed in the course become a permanent trait of character; the bodily organism, as affected by the observance or violation of the laws of health, is not put aside at the end of the course of study.

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#### ANNOUNCEMENT.

Since the JUNE ACADEMY was issued the office of publication has been moved from Syracuse to Boston. This change does not sever the relation of THE ACADEMY to the Associated Academic Principals, or imply any alteration in its aim or scope.

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## BOOKS RECEIVED.

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*Outlines of English Grammar*, by William G. Williams, Professor of Greek in Ohio Wesleyan University, Delaware, Ohio, pp. 122.

Hardly a page of Prof. Williams's book but contains matter to stimulate thought and to lift his readers up out of the ruts of old pedagogic tradition. He is good both to dissent from and to agree with. We marvel to find a professor of Greek writing so sensibly about English Grammar. Yet he sometimes shows an inclination to bring English speech under the rules he is familiar with in the grammars of the classic languages, and it is here that we venture to think he goes wrong.

At the outset of his book Prof. Williams announces a thesis from which we emphatically dissent. It is this: "Grammar accepts the language *as it is*, and without inquiring how it came to be, investigates simply the present facts and the laws of its structure." Such an announcement from a professed linguist is astonishing. The most useful and convincing English grammars to-day are precisely those which go back to the remotest sources of Teutonic speech and trace the growth of form and syntax, of phrase and idiom, through all the periods of which monuments are extant. We know another professor of Greek who cannot tolerate the phrase *house to let* because it implies that a house is to be engaged in doing the letting, whereas it is really the thing that is to be let. What this latter Greek professor needs is a little easily attainable knowledge of historical English grammar. Acquaintance with the past of English speech is absolutely indispensable to him who would understand English speech in its present form. No familiarity with Greek and Latin grammar will compensate for a knowledge of the grammar of old English.

When Prof. Williams insists that grammar is a science, and not an art, he is indubitably right. Grammar listens, observes, records, gathers facts: it does not prescribe rules. It states laws, which, however, are but generalizations of gathered facts of speech, and not rules of conduct. If unconscious speakers and writers say again and again *it is me*, the grammarian must make his account with this fact and generalize it somehow. He has no business to condemn a form of language that is used. The books of etiquette may frown on *it is*

*me*: but grammar has the more difficult task to account for its tenacity of life and to correlate it with other speech-forms that may have a kindred origin.

Though he claims for grammar that it is a science, and not an art, yet he has no difficulty in speaking of a *grammatical error*. An error he defines as a "departure from conventional forms." This is of course assuming that there is a *conventional form*. But listen, read, make notes, and then undertake to decide whether *it is I* or *it is me* is the *conventional form*. Which is the error? The fact is, it is almost impossible to plant one's self firmly on the position that grammar is a science. The practice of well-bred people, who have been schooled and disciplined into certain fixed habits, usurps in the general consciousness the rank of a grammatical principle. Prof. Williams is guilty of this inconsistency. The writers of school grammars have always been guilty of it. A code of usages of good society will have much to say about correct speech. Correctness here has the same meaning as correctness in dress and in manners at the table. That good society speaks so and so is enough. For the writers on etiquette to assume that their rules of speech are the laws of the science of grammar is absurd.

We are grateful to Prof. Williams for his discrimination between *relations* and *inflections*. He says: "Relations are subjective; they lie in the thought, are abstract, and are not easily detected; the inflections are objective; they lie in the outward form of the word, are patent at first glance." A good statement of the distinction between form and relation and of the confusion that has come to prevail in the use of these terms is embodied in the definition of the word *case* in the New English Dictionary. If case is form, then English nouns have only two cases because they have only two forms. If case is relation, then English nouns have an indeterminate number of cases. Prof. Williams finds "an intermediate word" between inflections and relations, namely, *accidents*, which he defines as denoting "not only actual *inflections*, but the *conditions*, as of position, or relation, in which inflection has arisen, or might arise." We cannot help thinking that this is straining somewhat the meaning of the word *accident*. But granting this use of the word, we note with interest that our author proceeds to define *case* as "the accident of the substantive that *serves to show its relation* to some other word in the sentence." To justify the conventional limitations of the cases, or accidents, of the substantive to three, he has, after all, to appeal to the "history of the



language, its present usage and its analogy with other inflected languages."

All this exposition of the distinction between form and relation, — and we have given but a slight idea of the fulness with which the subject is treated, — we assure our readers will be most interesting to every teacher of English, and will serve to clear up much confusion in the ordinary treatment of this important part of the grammar of our language.

A noteworthy feature of the book is the author's frequent parsing of typical and difficult instances of obscure construction. These concrete illustrations supplement his doctrine and lend animation, if this were needed, to his style. We cite one or two, in which we fancy our teachers of grammar may find occasion for serious questioning of his position, if not for downright dissent. "He entered into a certain man's house named Justus." *Justus* is here parsed as "possessive, predicative of *named*, which is qualificative of *man's*." "Creation's heir, the world, the world is mine." *Heir* is parsed as "possessive, appositive to the *substantive* pronoun (no longer in use) *implied* in the adjective pronoun *mine*." Is it not possible that in these instances the Greek professor comes to the front?

Personal pronouns, according to Prof. Williams, have no possessive case. The only possessive pronoun is *whose*. The forms *my*, *thy*, etc., usually called possessive, he names *adjectives* derived from the personal pronouns. In this he seems to us distinctly in the right.

Original and stimulating as our author is everywhere, perhaps it is in his treatment of the *verb* that he discovers these qualities in the largest measure. First let us express our satisfaction that he rejects with summary decisiveness the *potential mode*. We even give our cordial approval to the emphatic language in which he consigns this figment of modern school grammars to merited oblivion. "There are six modes," he says, "three *finite*, or inflectible in person and number; and three *in-finite*, or not inflectible in person and number. The three finite modes are the *indicative*, the *subjunctive* the *imperative*. The three non-finite modes are the *infinitive*, the *gerund*, the *participle*." The imperative mode he inflects through all the persons thus: *love I, love thou, love he; love we, love you, love they*. This procedure he justifies in a foot-note, thus: "The forms here given as first and third persons of the imperative mode were, in old English, parts of the subjunctive mode. But as the subjunctive no longer has an optative or volitional function in English, and as the logical value

of these forms is identical with that of the imperative mode, it is in analogy with the evolution of other inflections and functions to hold them now as imperative."

The following are interesting illustrations of Prof. Williams's conception of certain mode-forms which the indiscriminating and superficial method of the school books would include under the one name *potential*. "And there may I, though vile as he, wash all my sins away." Here *may wash* is in the indicative mode. "May I but meet thee on that peaceful shore, the parting word shall pass my lips no more." Here *may meet* is in the subjunctive mode. "May I myself at last appear unworthy, base, and insincere, or may my friend deceive me." Here *may appear* is imperative, first person, and *may deceive* is imperative, third person. "Cursed be I that I did so." Here *be I* is imperative, first person.

In view of his own practice, the author's deprecation, as regards grammar, of inquiry how the language came to be what it is, seems very strange. He evidently knows something of the past of our language, and uses his knowledge intelligently in making his discriminations.

We have made a long notice of a little book, but have come far short of expressing our estimate of its value. Every teacher of grammar, even such as study Old English and are familiar with the works of Maetzner, Koch and Fiedler, should possess Prof. Williams's *Outlines* and take to heart its teachings. Almost always it compels acquiescence. Could it be widely distributed among our teachers, it would inaugurate a revolution in pedagogic grammar.

Milton's *L'Allegro, Il Penseroso, Arcades, Lycidas, Sonnets*, etc., with introductions and notes by W. Bell, M. A.

*Selections from Tennyson*, with introduction and notes, by F. J. Rowe, M. A., and W. T. Webb, M. A.

Shakespeare's *Julius Caesar*, with an introduction and notes, by K. Deighton.

Shakespeare's *Macbeth*, with an introduction and notes, by K. Deighton.

Shakespeare's *Merchant of Venice*, with an introduction and notes, by K. Deighton.

The books named above, from the press of Macmillan & Co., London and New York, lie before us in all the outward attractiveness that invariably characterizes the Macmillan publications.

As regards their contents, we find with regret that they offer nothing which an English teacher can welcome as an advance or

improvement upon the annotated texts now so much in vogue. To annotate the classic writers for young persons is extremely easy if one has at hand the commonest outfit of dictionaries, concordances and variorum editions. If the note-maker has within him no restraining pedagogic principle to beget a wise temperance as to what ones of all possible notes he shall embody in his book, he may expand his work to an infinite bulk and thus give it a delusive appearance of superabundant helpfulness, when in fact it is fitted only to distract the attention and dissipate interest in the author.

The notes in the books above named come under the condemnation of excess in quantity. The *Merchant* has 90 pages of notes to 80 of text: the *Macbeth* 100 pages of notes to 75 of text: the *Cæsar* 100 of notes to 80 of text. To make this mass of notes much matter has to be included that would be superfluous even to the youngest reader of Shakespeare. In this respect Mr. Deighton's books are by no means peculiar. All the popular school editions err in this direction. They presuppose that there is no teacher at hand to give *such* help as is needed, *when* it is needed and in the *way* in which it ought to be given. They dump down before the bewildered learner whole cartloads of mixed help together with the task itself, and invite him to immediate, multifarious and undiscerning cram. When a pupil using one of these much-annotated texts gets his English lesson, he may be seen turning from text to notes as rapidly as possible, giving himself no time for thought, and in fact doing no proper thinking, but simply filling his memory with answers to questions that the notes themselves enable him to forsee.

Annotated editions presuppose a teacher about to ask routine questions: but a natural method would presuppose pupils about to ask juvenile, *naïf* questions, and a teacher ready to answer these questions in a truly professional manner; that is, not all at once, so as to end all interest in a difficulty then and there, but provokingly and suggestively, so as to set learners at work in fruitful fields and bring to pass little original discoveries and independent successes.

The notes needed in a schoolroom are so easy to make that this modern affectation of getting them made by erudite scholars and stored up in bulky appendages to the author's works is a ridiculous piece of pedantry, of which the teaching profession should become conscious as soon as possible, to the end of abolishing it all together. Notes of course are needed in a school-room. But these class-room notes, to be of any use to learners, should be made by the learners them-

selves. The book of notes should be a blank book at the beginning of the term, and a book of all sorts of pleasant memories and suggestions at the end of the term. It will then be a diary of work done. Its growth will have taken place under the eye of the teacher, and the English in which it is composed will have been an object of perpetual care. To the production of such an original note-book the crowded pages of editorial annotation are simply a hindrance.

The books above named have elicited our condemnation of excessive annotation simply by reason of the fact that they exemplify such excessive annotation in a rather remarkable manner. On the *quality* of the annotation we make no other criticism than that which is necessarily implied in the fact of its excess, namely, that it descends too low and undertakes, in many cases, to explain what is already clear enough. Teachers whose idiosyncrasy it is to like texts thus heavily handicapped will, we doubt not, like the texts under review. Granted the genus, the specimens are good. But to grant the genus is precisely what THE ACADEMY cannot do.

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*Handbook of Psychology* : Senses and Intellect. James Mann Baldwin, Professor of Philosophy in Lake Forest University. New York ; Henry Holt & Co. 1889.

For advanced students this is the best treatise on Psychology in the English language. The new methods of investigation have given us several good books, — Sully, Murray, and Dewey, for example, — but in none of these is there as much attention given to recent results as in the book before us. It is clear, admirable in definition, excellent in analysis, and it embraces, as has been just suggested, the results of the most recent study in Psycho-physics and in Psychology in general. Nor does the author hesitate to interpret the facts obtained by experiment, and his book is at this point, as at many others, superior to Sully's popular treatise.

But the book is not fitted, and probably not designed, for young students. It has no place in the high school, and even the average college student would find it difficult, by reason of occasional discussions of vital interest to the older student, but not easily understood by the beginner. Every teacher of Psychology should have it and use it, and it will be an indispensable hand-book for the University student, but for the general class-room its very excellences make it too full, and possibly too difficult. The ideal text-book for the college class is yet to appear, — brief, sharply analyzed, a basis for class-



room discussion, — but it is difficult for the scholar to contemplate its preparation, with his vision filled not so much by the young student as by the critical audience of his peers.

The point of view of this book is that of the Scotch school, but modified to suit the demands of recent investigation. The retaining of the old Hamiltonian divisions, Presentation, Representation, etc., in combination with the more scientific method employed in Murray's Hand-book, seems to us undesirable. Murray's excellent division into General and Special Psychology, — not the least of many valuable features of that book, — has commended itself to scholars, and its influence is seen in this volume, but it seems to us that it would be better to drop the old divisions, which are likely to occasion confusion in this combination with the new.

It is an ungrateful task to suggest faults in a book so admirable. There will be a hearty welcome ready for the promised second part, dealing with the obscurest of Psychological realms, the Feelings.

*Methods of Teaching Patriotism in the Public Schools.* Being an extract from an address delivered before the teachers of the Children's Aid Society of the city of New York, by Col. George T. Balch, Auditor of the Board of Education of the city of New York, June 28, 1889. New York: D. Van Nostrand Company, 23 Murray St. 1890.

*An Introduction to the Logic of Algebra.* With illustrative exercises. By Ellery W. Davis, Ph. D. (Johns Hopkins), Professor of Mathematics in the University of South Carolina. New York: John Wiley & Sons, 58 East Tenth St. 1890.

*Questions and Exercises on English Composition.* By J. Nichol, M. A. Oxon., LL.D., late professor of English Literature in the University of Glasgow, and W. S. McCormick, M. A., Lecturer on English Literature in Queen Margaret College, Glasgow. London: Macmillan & Co., and New York. 1890.

*Rudimentary Psychology for Schools and Colleges.* By G. M. Steele, D.D., Principal of Wesleyan Academy, Wilbraham, Mass. Boston and New York: Leach, Shewell, & Sanborn.

*Longmans' Junior School Algebra.* By William S. Beard, F. R. G. S., Assistant Master in Christ's Hospital. New York and London: Longmans, Green, and Co. 1890. All rights reserved.

*Longmans' School Trigonometry.* By the Rev. Frederick Sparks, B. A., Instructor in Mathematics, Manor House, Lee, S. E. Late Lecturer, Worcester College, Oxford. New York and London: Longmans, Green, and Co. 1890. All rights reserved.

*A Smaller Commercial Geography.* By George G. Chisholm, M. A., B. Sc., Fellow of the Royal Geographical and Statistical Societies. London: Longmans, Green, and Co., and New York: 15 East 16th Street. 1890. All rights reserved.

*Longmans' School Geography for North America.* By George G. Chisholm, M. A., B. Sc., Fellow of the Royal Geographical and Statistical Societies, and C. H. Leete, B. A., Fellow of the American Geographical Society, New York: Longmans, Green, and Co., 15 East 16th Street. 1890. All rights reserved.

*Advanced Physiography.* By John Thornton, M. A., Head Master of Clarence Street Higher Grade School, Bolton, Author of "Elementary Physiography." With 6 maps, 180 Illustrations, and colored Plate of Spectra. London: Longmans, Green and Co., and New York: 15 East 16th Street. 1890. All rights reserved.

*Lectures on Language and Linguistic Method in the School.* Delivered in the University of Cambridge, Easter Term, 1889. By S. S. Laurie, A. M. Edin., LL. D. St. And., Professor of the Institutes and History of Education in the University of Edinburgh. Cambridge: At the University Press. New York: Macmillan and Co. 1890. All rights reserved.

*Practical Sanitary and Economic Cooking.* Adapted to Persons of Moderate and Small Means. By Mrs. Mary Hinman Abel. The Lomb Prize Essay. Inscription: "The Five Food Principles, Illustrated by Practical Recipes." Published by the American Public Health Association. 1890.

*School Hygiene, Including Simple Directions Respecting Ventilation, Eyesight, Infectious Diseases, and First Aid in Injuries. For Schools and Families.* By W. Jenkinson Abel, B. A., etc., Clerk to the Nottingham School Board. London: Longmans, Green, and Co., and New York: 15 East 16th Street. 1890. All rights reserved.

*A Complete Manual on Teaching Arithmetic, Algebra, and Geometry.* Including a Brief History of these Branches. By J. M. Greenwood, A. M., Superintendent of Schools, Kansas City, Mo. New York: Effingman, Maynard and Co., Publishers, 771 Broadway and 67 and 69 Ninth Street.

Heath's Modern Language Series. *Selections from Heine's Poems.* Edited, with Notes, by Horatio Stevens White, Professor of the German Language and Literature in Cornell University. Boston: D. C. Heath & Co., Publishers. 1890.

Clarendon Press Series. *Cicero pro Roscio.* With Introduction and Notes, by St. George Stock, M. A., Pembroke College, Oxford. Part I.—Introduction and Text. Oxford, at the Clarendon Press. 1890. All rights reserved.

Clarendon Press Series. German Classics. *Schiller's Die Jungfrau von Orleans.* Buchheim.

*Origin and Development of the New York Common School System.* An Address delivered before the New York State Teachers' Association, at Saratoga Springs, N. Y., Tuesday Evening, July 8, 1890, by Andrew S. Draper, Superintendent of Public Instruction, State of New York. Albany: James B. Lyon, State Printer. 1890.

*Ein Tiroler Passionsspiel des Mittelalters.* Herausgegeben von H. M. Schmidt-Wartenberg, Ph.D., Professor of Latin and German in the University of Deseret, Salt Lake City, Utah. Baltimore: The Modern Language Association. 1890.

# THE ACADEMY:

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*A JOURNAL OF SECONDARY EDUCATION*

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DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND  
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## *STUDIES IN LITERATURE.*

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A. P. MARBLE, WORCESTER, MASS.

LITERATURE is the "essence of human intellect." It contains the essential oils of the world's activity. According to Taine, literary productions are not to be regarded as isolated specimens, to be studied for themselves alone. Like fossils they are indices of the life of an age; and in them we behold the history of a people. As in the face of a man, his form and lineaments, are left the traces of his experience — the lines of thought that furrow his brow, of joy and gladness that lighten the eye, and of care and trouble that depress the corners of his mouth — traces that may be read more or less distinctly by those of like experience, — so in the literature of a period or a nation there is left the imprint of a people's life and history; the habit of thought of that people which has grown out of their traditions, their environment and their activity. For authors write that which people wish to read, or else their writings are not incorporated into the literature of the period. And in order thus to write, an author must be *en rapport* with the times. That the *Paradise Lost* was sold for five pounds, makes no exception, it seems to me, to this statement; for though its form and its beauty of expression — the grandeur of its conceptions — were beyond the capacity of the people of that day, or at least the particular bookseller thought so, yet the religious conceptions of the times are portrayed in the work; and in it is somehow contained the religious history of

the English people up to that date. To be thus in harmony with the spirit of the age, a writer must have had within himself an epitome of the history of his race. It is said that the embryonic growth of certain animals repeats the successive stages through which the species has attained its present perfection; and by analogy the mental development of a man may repeat in some sense the intellectual growth of the race.

Accordingly Guizot has said: "The historian might place himself for a given period, say a series of ages, or (either) in the human soul, or with some particular people; he might study, describe, relate, all the events, all the transformations, all the revolutions which had been accomplished in the internal man; and when he had finished his work, he would have a history of civilization amongst the people and in the period he had selected."—(*Civilization in Europe*, p. 25, quoted by H. A. Taine.)

The study of literature, then, is the study of mankind. In a broad way it is not the study of this or that author. And man, including woman of course is, after all, everything there is in this world. The physical world is full of beauty, grandeur, music, and light. But there is no sound where there is no ear to hear; the gorgeous tints of rainbows fill all the spaces of the heavens, but they are all lost unless there is an eye to see; in sunny vales flowers grow with an endless variety of color and fragrance, but the beauty is all lost if there is no sense to convey and no mind to perceive it; age after age Mt. Shasta has lifted its snowy peak in solitary magnificence; the Yellowstone for centuries has cut out shapes of surpassing grandeur in its untrodden valley; and there was no magnificence and no grandeur till man broke into the solitude.

So likewise, the order of the universe, the harmony of the multitudinous stars, was not, till the mystery had been penetrated by the thought of man.

Ordinary places also become shrines by human visitation, not by the presence of a god. What but the Pilgrims has turned the eyes of this generation to the sandy shore of Plymouth with its moderate-sized boulder, when the cliffs of Marblehead and Cape Ann, and the whole coast of Maine from Kittery to Calais are far grander? And what has embalmed the heroism and the devotion of those Pilgrims, but the burning eloquence of Everett and Webster and the immortal lines of Mrs. Hemans? Gettysburg, within the memory of every one of us, was an unknown Pennsylvania village in the midst of ordinary farms. Through a human interest, since it was the pivotal point in the nation's struggle for existence, that field has become resplendent in history; and the



coming generations — every child in all the schools of this great country, and the parents of many of them — will know of that field only through literature; for after the other heroes, living and dead, Lincoln was there and made his never-to-be-forgotten speech. And the real history of Gettysburg is found in the American literature of the preceding two hundred years.

It is not, however, mainly through this hallowing of places and times by striking events, that the life of the human race is seen. The particular spot may be lost sight of; the exact period of time may disappear in the dimness of uncertainty, while the great movements pregnant with future progress, loom up to be seen through the ages, just as the gilded dome of the state-house might rise above Boston buried in fog, and, glittering in the sunlight, be seen from Mt. Wachusett or from a ship leagues out upon the sea.

Moses heard the voice in the burning bush; Jacob rested his head upon a stone in the vale of Padan Aram, and in his dream saw a ladder raised to heaven and the angels of God ascending and descending upon it.

Nobody can now find the spot where the bush grew, nor is the stony pillow anywhere to be seen; but the revelation to Moses affects, through the Hebrews, all Christian civilization to-day; and through a broader and more spiritual culture, heaven is brought near in the souls of men as on the ladder which Jacob saw in his dream.

So true it is that the spiritual, the intellectual, is more enduring than the material; the events wrought by human agency, more important than the places or even the individuals affected; literature, more lasting than monuments of brass, and more representative of the history of mankind, than any mere chronicles.

II. — The aim in the study of literature is, then, to become acquainted with mankind, and thus to become more of a man. The life of any one man is brief, and his experiences are circumscribed. We inherit much, or else our progress as a race would be inappreciable.

It is said that the cobra frequently carries in its mouth a peculiar pebble which emits a greenish light at night, similar to the glow from the females of a species of insect upon which the cobra feeds. Attracted by this false light the male insects flock to the place, and the cobra feasts upon them. It is thought that some very ancient cobra must have met with one of these flocks of insects around one of these pebbles, by accident; and he enjoyed his repast of course; he went

again and again till at length the pebble was swept away by the tide ; and then he fasted. At length he fell upon another pebble with its swarm of insects. Finally he had the wit to perceive the relation between the stone, the insects, and a good meal. He attracted the attention of another cobra, who captured the stone ; and the first cobra hunted up another stone. After a long time it came to pass that every young cobra would provide himself with one of these pebbles.

Perhaps — perhaps — we inherit experience in this way. We gain a little year by year in our own life. We gain still more, unconsciously, by intercourse with our fellows. But of all these, the sum total is small ; and if we have these only, our mental horizon is very narrow. In the study of literature, that epitome of the experience of an age, a people or the race, we have the means of broadening that horizon. It is thought that makes men ; and thought is stimulated by acquaintance with what other men have thought, that is, acquaintance with literature.

Incidentally, an aim in the study of literature is style — the expression of ideas. Thought is almost impossible without expression. The forms of thought are inseparable from the thought itself ; that is we cannot think without the use of language. All ideas not properly clothed in language are vague and elusive. They are like disembodied spirits that flit away and vanish into thin air.

In the elementary steps even, language cannot be studied with profit much faster than ideas are formed whose expression language is. Expression goes hand in hand with the thought to be expressed. The thought of great minds, expressed in our literature, introduces us to a new realm of thinking by imperceptible gradations ; and through the imagination we enter into the experiences and the life of other men and make them our own.

But men of age and experience have a great advantage, which the young do not appreciate. There is in them a ripeness, a maturity, a certain subtle discrimination, not usually found in the vealy productions of youth. It is rather amusing, when it is not sad, to note the impressions that youth has of advancing years. In ancient countries the aged were revered as the repositories of wisdom. Through their long life they had treasured experience and knowledge which the young had no opportunity to acquire. Now, all this appears in books ; and any boy can read much more than his elders can tell him. He thinks he knows the whole, when in fact he does not ; since language cannot reveal much, beyond that to which there is a response within

us. However bright the light, there is no vision without an eye to see. Age has, hence, come to be looked upon as an unhappy descent to the grave ; and death, as the final catastrophe.

“ Come to the bridal chamber, Death,  
 Come to the mother when she feels  
 For the first time her first-born’s breath ;  
 Come when the blessed seals  
 That close the pestilence are broke  
 And crowded cities wail its stroke ;  
 Come in consumption’s ghastly form,  
 The earthquake shock, the ocean storm ;  
 Come when the heart beats high and warm  
 With banquet song and dance and wine ;  
 And thou art terrible : — the tear  
 The groan, the knell, the pall, the bier,  
 And all we know, or dream, or fear,  
 Of Agony, are thine.”

This whole impression of advancing age and death is all wrong. It should be dispelled from the minds of the young. If it is a necessary result of our religious teaching, then all the worse for the religion. It is in a rational study of the best literature that such false notions disappear, and the sunlight of a broader faith illuminates the mind.

“ I vex me not with brooding on the years  
 That were ere I drew breath ; why should I then  
 Distrust the darkness that may fall again  
 When life is done ? Perchance in other spheres —  
 Dead planets — I once tasted mortal tears,  
 And walked as now among a throng of men,  
 Pondering things that lay beyond my ken,  
 Questioning death, and solacing my fears.  
 Who knows ? Oft times strange sense have I of this,  
 Vague memories that hold me with a spell,  
 Touches of unseen lips upon my brow,  
 Breathing some incommunicable bliss !  
 In years foregone, O Soul, was not all well ?  
 Still lovelier life awaits thee. Fear not thou ! ”

In order to be fully apprehended, the best literature must find a responsive chord in the mind ; and this response comes oftener, in its perfection, in maturer years. To be a little personal : In my youth I quite liked Gray’s *Elegy* ; and it was said to be one of the best poems. In its rural scenery it appealed to my experience, for my youth was spent upon a New England farm. “ Homeward the plowman plods his weary way ” called to my mind many an evening in

early spring when, with boots heavy with the clods that clung to them, my very bones would echo "plods his weary way." At length, after many years — how many I would not dare to say — I was confined by a broken leg. The days dragged wearily and the nights brought little rest. Once, at one o'clock in the morning, I was wakéful, and called my wife to bathe my limb. By some suggestion or other unrecognized by me, the lines of the *Elegy* kept running through my head; and for the life of me I could not recall the first line. I asked my wife what it was, and as frequently happens to us, the sudden question drove it from her mind. She took down the volume and read a few stanzas. Somehow I was charmed. She read on, repeating now and then at my request. I never knew that poem before. There was a meaning in every line never so perceived.

"The applause of listening senates to command,  
 The threats of pain and ruin to despise,  
 To scatter plenty o'er a smiling land,  
 And read their history in a nation's eyes,  
 "Their lot forbade; nor circumscribed alone  
 Their growing virtues, but their crimes confined;  
 Forbade to wade through slaughter to a throne,  
 And shut the gates of mercy on mankind;  
 "The struggling pangs of conscious truth to hide  
 To quench the blushes of ingenuous shame,  
 Or heap the shrine of Luxury and Pride  
 With incense kindled at the Muse's flame.  
 . . . . .  
 "For who, to dumb forgetfulness a prey,  
 This pleasing, anxious being e'er resigned,  
 Left the warm precincts of the cheerful day,  
 Nor cast one longing, lingering look behind?  
 . . . . .  
 "No further seek his merits to disclose,  
 Or draw his frailties from their dread abode,  
 (There they alike in trembling hope repose,  
 The bosom of his Father and his God."

It seemed to me a revelation. My mind was responsive to the thought; and I concluded that in all poetry and in all literature there might be more that I could not appreciate, than all that which I had ever perceived. Since then, I have noticed what I do not remember to have seen before respecting that poem. Gen. Wolfe remarked, before the battle of Quebec, that he would rather have written that



poem than to capture the city. He was then in the portentous shadow of a coming battle, cast before by some occult photography, we know not how; and he had just then come to know what Gray meant in every line.

I did not die gloriously the next day, but I have since had an increasing respect for Gen. Wolfe. Gray had put eight years into that poem. It took me more than thirty years to see what was there; and it made me a better man.

Now, by all this, it is my purpose to imply that there is in all good literature—that which stands the test of time—such an element; and to every real student, I suppose, there is an added revelation, as he matures, richer and sweeter by far than the first. The student grows to know more and more the thoughts of great minds, and in so doing, and in proportion as he does so, he himself advances.

Such is a great aim in the study of literature.

### III. — As to the Methods :—

I would not presume to speak in this presence of cultivated men, as to you. For a school, a high school, I have some remarks written, at a playful request of mine, by a recent graduate of the Normal School at Worcester. I received it by mail just twenty-four hours after the request. They are sound in theory and interesting in themselves; but they have an added charm for me, because I can trace in them the marks of the personality and way of thinking of a superior teacher; and they show how all good teaching leaves its imprint upon the minds of bright pupils.

“If I am to teach literature to a class of boys and girls, I must have my target, just as truly as the child with the bow and arrow in his hands must have his. I must know at what my teaching is aiming, or I shall be as likely to fire into the ground as at the stars.”

“I begin with the hypothesis that literature is to be studied in our high schools, as a form of culture and education beneficial to our growth, though, it may be, not directly helpful as a preparation for bread-earning. If one were to ask a class of boys and girls, after a year’s study of literature, in what way they expect to use their knowledge, I imagine he would get some such answers as these. ‘I shall be able to make a great many pat quotations.’ ‘I shall be able to talk on literary subjects.’ ‘I shall be able to use better language.’ ‘I have got started in reading and in thinking for myself;’ or perhaps ‘I don’t suppose I shall ever use it at all.’”

"These answers, with the exception of the last, are reducible to two purposes : To show off what one has accomplished, and to be able to accomplish in the future.

"If one's education is to be only an end, and not a means to something farther, it is a poor thing to waste fifteen years of work for, and not usually worth trying to show off. It is what one is, or is able to become as the result of the work he has done, rather than the exact measure of knowledge he has gathered together, that is of value to him. Things plastered upon the outside of a person soon wear off and show the old texture through. That which is taken in as a germinating force, fostered and helped to grow, changes the very fibre of the mind, and makes it able to be and to produce that which it could not have been or produced otherwise.

"The activity of the mind is of course thought. And just in proportion as we can increase the thoughtfulness, the habit of thinking deeply and independently, just in that proportion can we give vitality and strength to the intellect of a youth.

"Young people think, of course. But what about? Take a class of boys and girls fifteen or sixteen years old. What sort of thoughts are making themselves at home in their minds, to order their affairs? There is the last ball-game, the tennis match, the new spring dresses, the next dancing school, endless novels, with many tedious school books from which to economize time for more interesting things. Here is much thinking, but little thought. Much of it a very healthful kind of thinking, but not just the kind that is going to bring them out men and women, intellectually wide-awake, serious, and clear-sighted, the kind of men and women we need.

"Take this class of young people and get them deeply interested in a play of Shakespeare. The plot itself can be trusted to get their interest. Then just make those characters live to those boys and girls; and if Iago and Othello, Macbeth, Portia and Hamlet do not teach them some lessons about themselves and their relations and duties to their fellow men I am greatly mistaken.

"Make them hear a little of the music of Milton, entertain them with some of Dickens and Scott, get them up to their ears in discussions over the philosophy of Ralph Waldo Emerson. In each case pick out the great gift, the leading characteristic of a writer, and just make that one point *tell* on the thoughts of the pupils. Aboveall things, do not discourage the pupils from making their own comments and expressing their own opinions. They will often seem ridiculous to the teacher;

but youth is the time to be ridiculous, and mistakes are the surest way to correct ideas.

"Would I have them learn quotations? Certainly. Things committed to memory are seen in the many different lights of after reflections, while a thing read once has but the light of a passing mood.

"But committing to memory should not be the chief work of a class, and pupils should be tempted and praised, rather than driven and scolded, to quotation-learning.

"It is very common, too, I think, in the study of literature, to require a pretty full biographical account of the life of each writer studied. This would do very well for a psychologist or a philosopher, or even for a man of mere general culture, provided he were sixty years old. And so with long criticisms, and books about books; they are well for the writer of forty. But give these young boys and girls the works of great men, pure and simple, and let them feed on them, and grow, mentally and morally.

"In my opinion, it is better, too, not to include very many writers in a school literary course. Just as it is better to have a good talk with one intellectually great man than to have an introduction to forty, so it is better to know one poet than to know of forty. To study literature and to study the history of literature are two different things, and they should not be exchanged for one another. But the life is in the literature, not in its history."

IV.—The best literature is far beyond the comprehension of the young student; he sees at first but a small part of the knowledge, the philosophy, the beauty, or the art of expression, which it contains. And in proportion as any production embodies concealed excellences which reveal themselves upon closer examination, in proportion as they contain a wealth of treasures that must be mined, in order to be possessed, in that proportion will the production be enduring.

To advanced students also the treasures of literature are not all on the surface. If they were, then literature would pall upon the taste and its charm would be gone for them. For us who walk in the lower regions, the authors whose works have lived shine above us; we see the gleam of the sunlight on their elevated brows — the gems of thought that glitter and shine out, and charm and entice us on; but as we advance to higher plains, new beauties and greater attractions display themselves; grander conceptions open on the sight; "Hills peep o'er hills, and Alps on Alps arise."

It is always a mistake to keep children reading that which is written down to the low level of their comprehension. What is fully known loses its charm. It is both pleasing and profitable for any one to be brought face to face with the great boulders of thought, and however feeble we may be, to grapple with the sublimest truth. The only necessary condition for a student is, that he find sufficient that is comprehensible to him to enchain his interest.

In Macaulay's essay upon the Puritans, — that writer of English as massive in style as his thoughts are grand — he accounts for the steadfastness of purpose of those sturdy men and women in these most eloquent periods : —

"The Puritans were men whose minds had derived a peculiar character from the daily contemplation of superior beings and eternal interests. Not content with acknowledging, in general terms, an overruling Providence, they habitually ascribed every event to the will of the Great Being for whose power nothing was too vast, for whose inspection nothing was too minute. To know Him, to serve Him, to enjoy Him, was with them the great end of existence... The difference between the greatest and the meanest of mankind seemed to vanish when compared with the boundless interval which separated the whole race from Him on whom their own eyes were constantly fixed. They recognized no title to superiority but His favor ; and confident of that favor, they despised all the accomplishments and all the dignities of the world... Their palaces were houses not made with hands ; their diadems, crowns of glory which should never fade away ! On the rich and the eloquent, on nobles and priests, they looked down with contempt ; for they esteemed themselves rich in a more precious treasure, and eloquent in a more sublime language ; nobles by the right of an earlier creation, and priests by the imposition of a mightier hand."

It is not to be expected that the youth of this period can give their minds solely to such profound contemplations as these. In the rush and hurry of the times, when telegraphs and power-presses bring daily to our view the activity of the whole world, when time and space seem almost to be annihilated by steam and electricity, it is not so easy for even the profound student to sequester himself from finite wonders, and devote himself to an exclusive study of the infinite. Possibly it may not be desirable, now, for whole communities to be thus engrossed, as the Puritans were. While the freshness of modern discovery is upon us, to this generation may be assigned the duty of developing and applying the forces of nature for the service of the mind. But this



service can not be rendered completely, without the influence of those studies which tend to mental power and the development of thought : — not the study of science directly, but the study of literature, the history of thought and the record of thought, through which scientific discoveries have become possible and by which those discoveries have been made. It was not by the study of politics, nor of civil institutions, that the Puritans became the fit founders of states. By a loftier contemplation, apparently, and to the superficial observer, unrelated to the work they had to do, they were fitted to lay firm and deep, on the shore of a continent boundless and to them unknown, the basis of an empire “ of the people, for the people, by the people.”

It is by similar lofty contemplation, not of petty details near at hand, not of writings puerile and inane ; it is by study of the great and good in the ages gone, and in our own time, — by familiarity with literature, — that the children of this generation are to be fitted to preserve the heritage of good government ; and in this study is the earnest, the pledge, of future progress.

V. — In all literature worthy of the name there is an artistic element. Fact, philosophy, imagination, 'poetry, are all included ; and it is the artistic handling of the material that constitutes literature. A barn is a plain, useful, and substantial structure ; it has no beauty except the homely beauty of utility. In a cathedral, utility and beauty are combined by the art of architecture. Symmetry of form, harmony in design, unity of purpose, permanence of structure, grace and delicacy in execution — all these combine to produce a pleasing effect, in a church. The taste is gratified. There is restfulness in beholding the fitness of part to part. Add to this the effect of color, and harmony with the surroundings, strength to resist decay, and adaptability to its uses, and we have art. There is just as really an art in literature. Material is combined in forms of beauty, as in architecture. Its form adds to its effect, just as form in the cathedral gives it its charm. There is a rugged strength and utility in the records of a town meeting ; they describe the transactions in the briefest and most direct way ; and as records, they are much better when so made, just as a barn looks better as a barn and without a steeple ; but these records are not literature.

The artistic element in literature is what gives it its charm and attractiveness, and thus makes it enduring. Let me read an extract upon the trial of Warren Hastings. The simple statement would be that this trial took place in the hall of William Rufus, a place where

state trials had frequently occurred ; and both houses of parliament, the nobility, and members of the royal family were present, together with many distinguished artists and men of letters. Macaulay ornaments the scene by allusions that cover a wide range of history, of literature, of art, and of criticism ; and the picture stands out before the mind with all the vividness of a painting, — almost in reality.

“The High Court of Parliament was to sit, according to forms handed down from the days of the Plantagenets, on an Englishman accused of exercising tyranny over the lord of the holy city of Benares, and over the ladies of the princely house of Oude.

“The place was worthy of such a trial. It was the great hall of William Rufus, the hall which had resounded with acclamations at the inauguration of thirty kings, the hall which had witnessed the just sentence of Bacon and the just absolution of Somers, the hall where the eloquence of Stafford had for a moment awed and melted a victorious party inflamed with just resentment, the hall where Charles had confronted the High Court of Justice with the placid courage which half redeemed his fame. Neither military nor civil pomp was wanting. The avenues were lined with grenadiers. The streets were kept clear by cavalry. The peers, robed in gold and ermine, were marshalled by the heralds under Garter King-at-Arms. The judges in their vestments of state attended to give advice on points of law. Nearly a hundred and seventy lords, three-fourths of the Upper House, as the Upper House then was, walked in solemn order from their usual place of assembling to the tribunal. The junior Baron present led the way, George Eliott, Lord Heathfield, recently ennobled for his memorable defence of Gibraltar against the fleet and armies of France and Spain. The long procession was closed by the Duke of Norfolk, Earl Marshal of the realm, by the great dignitaries, and by the brothers of the King. Last of all came the Prince of Wales, conspicuous by his fine person and noble bearing. The gray old walls were hung with scarlet. The long galleries were crowded by an audience such as has rarely excited the fears or the emulations of an orator.

“There were gathered together, from all parts of a great, free, enlightened and prosperous empire, grace and female loveliness, wit and learning, the representatives of every science and of every art. There were seated around the Queen the fair-haired daughters of the House of Brunswick. There the Ambassadors of great Kings and Commonwealths gazed with admiration on a spectacle which no other country in the world could present. There Siddons, in the prime of her majes-

tic beauty, looked with emotion on a scene surpassing all the imitations of the stage.

"There the historian of the Roman Empire thought of the days when Cicero pleaded the cause of Sicily against Verres, and when, before a senate which still retained some show of freedom, Tacitus thundered against the oppressors of Africa. There were seen side by side the greatest painter and the greatest scholar of the age. The spectacle had allured Reynolds from that easel which has preserved to us the thoughtful foreheads of so many writers and statesmen, and the sweet smiles of so many noble matrons. It had induced Parr to suspend his labors in that dark and profound mine from which he had extracted a vast treasure of erudition, a treasure too often buried in the earth, too often paraded with injudicious and inelegant ostentation, but still precious, massive and splendid. There appeared the voluptuous charms of her to whom the heir of the throne had in secret plighted his faith. There too was she, the mother of a beautiful race, the Saint Cecilia, whose delicate features, lighted up by love and music, art had rescued from the common decay. There were the members of that brilliant society which quoted, criticized, and exchanged repartees, under the rich peacock-hangings of Mrs. Montague. And there the ladies, whose lips, more persuasive than those of Fox himself, had carried the Westminster election against palace and treasury, shone around Georgiana, Duchess of Devonshire."

In this one description there is interwoven politics, in the Westminster elections; society, in the salon of Mrs. Montague; literary criticism on the works of Parr; the historical paintings of Reynolds, and much more. Cicero and Tacitus are recalled from the buried past to grace the occasion; Mrs. Siddons's "majestic beauty" throws a charm upon the scene; the imagination lingers to depict what the fair-haired daughters of the House of Brunswick may be like; and like a bit of color to light up the scene, allusion is made to the love of the "heir to the throne." The artistic weaving in of all this, and the symmetry of the entire description is in effect like the spans and arches, the columns, the architraves, the corbels, the carvings, and the soft and brilliant lights of some fine old minster. It displays, it seems to me, the literary art as perfectly as the most beautiful palace displays architecture.

In its simpler forms literature is useful just as the simpler forms of drawing are allied to the mechanical arts; and as drawing advances step by step through perspective, shading, and coloring, till it becomes fine art, so literature advances to the expression of higher forms of culture.

In painting, the blending of colors, the handling of details, the suggestions of that which is not fully expressed, convey, to those who have learned to see, the very soul the artist.

That is a very intelligent dog who can see in a picture upon a flat surface, the animal that is represented on the canvas. It requires some soul to see even that little; and it requires an artistic sense, trained and cultivated, to appreciate the work of a great artist. The same is true of literature in its higher forms; and it is for the sake of this higher culture, that the great products of the literary art are to be studied.

Poetry is the very highest form of this art. It occupies a realm above and beyond the region of fact and philosophy — outside the sphere of mere intellect and knowledge; it appeals largely to the feelings, the sensibilities which are a kind of sublimated sense; and this art deals in allusions, hints, suggestions, rather than in out and out statement. In the study of literature in general, the spirit is to be sought rather than the form in which that spirit is revealed; and the form should be studied, not so much for itself as for the spirit which it contains. In poetry, on the other hand, the form is a more important feature than in prose; and for this very reason its beauties lie more artistically hidden; they display themselves with more coyness, and they are to be perceived only by the poetic sense.

Prof. Bain says: "Poetry agrees generally with painting, sculpture, architecture, and music; and its specific mark is derived from the instrumentality employed. Painting is based on color, sculpture on form, music on a peculiar class of sounds, and poetry on the meaning and form of language."

In the study of literature, that is a very puerile, elementary, and kindergarten-method, which confines itself to petty and unimportant particulars about an author's personality — the color of his hair, whether he parted it in the middle, what he had for breakfast, etc., etc., *ad nauseam*. It is indeed of some interest to know enough of the personality of an author to enable us to distinguish him. Personal peculiarities also in some instances account for the eccentricities of an author. The deformity of Lord Byron is always associated with certain erratic peculiarities of his writings; but these are not accounted for by any bodily defect, because many a man of feeble constitution and in the midst of suffering, has shown in his work the evidence of a lovely spirit, cheerful and resigned. DeQuincy and Coleridge were addicted to the opium habit; and I venture to say that in some cases it would be more rational to attribute some parts of their weird imag-



inings to the effects of the drug, than to delve for some deep-hidden meaning, or to seek for a philosophy too profound for ordinary men of genius. It is an interesting fact to know that Sir Walter Scott was fond of dogs; that he had a lot of them; that they were very much attached to him. For these circumstances attach to him a certain human interest; and in them we find a reason for the cheerful good nature so abundant in his works. It helps a little, too, to know that Daniel Webster had beetling eye-brows, a sharp black eye, and a sonorous voice; and that his figure was erect and well-compacted. Two or three distinguishing traits, however, are enough to fix in mind any author. All beyond this is mere biography. It is not the study of literature.

If the *Scarlet Letter* did not engross the reader so that he becomes wholly oblivious of Hawthorne — whether he was a custom-house officer at Salem or an accountant in New York — then the *Scarlet Letter* would not be the masterpiece of imaginative writing which it is. Who cares whether Burke was tall or short, dark or fair, English or Irish, when we read the *Reflections on the French Revolution*?

His personality was sunk in the discussion of that eventful period as completely as if a disembodied spirit held the pen. Nor should the mind of a student be diverted from the study of a literary subject by petty and curious details in the text, any more than by irrelevant incidents in the author's life or that of his family.

If the structure of the sentence is studied, this should be done in order to throw light upon the text; if allusions are made, their meaning should be sought, for the purpose of appreciating the added force which those allusions give. Mere literary puzzles are no part of literature. If a student is required to seek outside for something to illuminate the text, it should be done for a definite purpose and not merely to furnish something to do; and the clue should be given him so that the search may be intelligent, and so that the quest may be an aid to further search.

But the searching and the analysis, the study and the comparisons with parallel passages, should all tend to the one end of placing the student in the author's point-of-view, and of entering into his spirit so as to see with his eyes, and to feel as he feels.

Especially is this true in the study of poetry.

"For poetry is not knowledge to be apprehended; it is passion to be felt — passion for the truth revealed in beauty, and for the hinted truth, too beautiful to be revealed."

## I. COMPOSITION TOPICS.

S. THURBER, BOSTON.

THE first requisite of success in composition-writing is a good subject to write about. In the small field of the school the same rule holds as in the arena of literary distinction. A good theme is an opportunity. A bad theme invites failure at the outset. Professional writers for the papers and magazines are compelled to put up with themes they do not desire, and so give us the padding and hack-work that form the bulk of periodical literature. To be condemned to indiscriminate reading of the weeklies and monthlies would be no less depressing than is the teacher's task of reading multitudes of pupils' compositions.

Fortunately nobody is compelled to read all that the magazines print. But the English-teacher has incurred the doom of reading all that his pupils write in the way of language-exercise. Yet in large measure he has his fate in his own hands. His two-hundred pupils are so many possible literary hacks of the worst sort, capable of producing an immense mass of matter of unspeakable dreariness. But they are only possible hacks, not by any means certain and inevitable ones. And here is the teacher's opportunity. It is not only his function to receive and correct whatever quantity of manuscript his pupils impose upon him in response to a call for compositions, but it is his duty no less to preside over the very genesis and inception of the compositions and to watch and shape their development. He is himself responsible that these exercises shall not turn out wholly dull and conventional.

At the time of announcing a composition exercise it is necessary to devote perhaps an entire class-period to admonition as to the kinds of topics that must or must not be chosen. Topics to be summarily rejected are those which must be prepared for by reading. To set a youth at work reproducing in language matter that but recently came to him in language is to hamper him seriously from the beginning. He cannot disentangle his information from the language-forms in which he got it a little while before. His work smacks of the encyclopedia. What he gives was not his own, and may have received absolutely no color from his own mind. Teachers of literature are apt to assign such themes as the *life of an author*. No immature person can write well on such a topic. Even a trained writer would probably do no more than make a good compilation. Nor is it right

to let a youth take a theme of botany or zoology unless he have observed some facts related to these sciences and can give experiences of his own. Every boy's head is full of good zoological themes, but these are his adventures with animals and not at all his book-knowledge of them. The girl into whose chamber window came a gray squirrel, tame with hunger and anxious to make friends, has an excellent theme for a composition; as also has the girl who has a garden in which she watches the growth of her plants. The girl who learnedly describes the sea-urchin, but has never seen one, would have done better to describe the old family cat at home.

Literary themes generally are ill-suited to younger pupils, and should be allowed only with great caution even in the older high-school classes. Literary criticism is a drug in the world's market. The English teacher is probably cloyed with it already, and can only with repugnance brace himself to the reading of more, even though it be as good as the average of what is printed in this sort. It is not difficult to write platitudes about Hamlet and Ophelia, about Shylock and Portia, about Prospero and Miranda. It may indeed happen that a pupil has something original to say about these well-worn themes; but the chances are that he will merely catch the style of certain chapters quoted in his annotated Shakespeare and run on with tolerably correct sentences in the conventional vein. A girl who is thoroughly interested in the question whether Hamlet's inaction was due to subjective traits of character or to external obstacles, and who explores Furness and attends Mr. Clapp's lectures that she may get light on the question, may of course write on Hamlet. She will interest you and the class with her composition. She writes from a full mind and puts her heart into her work. So the girl who is fresh from *Looking Backward*, and is burning with indignation against the evils of the social system, and who desires to free her mind by reading to her class-mates her thoughts on this subject, is entitled by all considerations to her chosen topic. She will dispel the *stupor paedagogicus* that is forever settling down upon the class-room, and will stimulate others to sympathy or, what is equally good, to energetic protest.

The first essential of a good composition-topic is that it interest the pupil's mind and be fairly within his competency. All other considerations must bend to these. What Macaulay says about the "dignity of history" may be applied to what seems to weigh like an incubus on some teachers of English,—an absurd sense of the *dignity* of composition-writing. As if the topic must sound well at any rate, whatever

may follow in the way of discussion. But there is no *dignity* of composition topics. Whatever interests the honest-minded boy or girl is a good theme for him or her to write about. Pupils often have a false sense of shame about writing for their teacher's eye on their homely interests. They will sometimes be found, no less than the conventional teacher, planning to have dainty or sonorous topics, regardless of their power of performance. Their interest is in the topic as such, in its imposing appearance on a programme or at the head of their exercise. From some source or other, — let us hope a non-pedagogic one, — a girl had received as a topic for an essay "Self-Control." Thereupon she was reduced to the necessity of searching for books and articles on this elusive theme. The subject was wholly outside of her thought, and she could find no assailable point on any side. If, as she was proceeding, she did finally effect an entrance, it was to sit within her subject like a cormorant: her work there was sure to be dishonest work, though the dishonesty was none of hers.

The topic must interest the pupil. Therefore it is better to recommend at the outset a topic that interests him naturally than it is to choose one that interests you, and then to try to create in him an interest that did not exist at first. The latter procedure, however, is by no means a wrong one, if the way to success in it lies clearly and unmistakably open. But here the teacher is liable to be deceived. Pupils are complaisant and understand well the pretty hypocrisy of appearing interested when they are not so in reality. If the teacher is sure that the pupil is genuinely in sympathy with a given topic and is well at home in it, he may allow him to try his pen on it, even though it would seem at first to be a topic requiring more maturity of thought and wider knowledge than the pupil's years would imply.

That they may be genuinely interested in their compositions, pupils should be allowed to choose their subjects. But they should choose under abundant advice and within a restricted range. With the advice as to what they may choose should be joined certain downright prohibitions of whole classes of topics. They must absolutely *not* adopt topics that will send them to books for further information. They must not choose abstract topics; and if they do not know what is meant by abstract topics, this must be fully explained and illustrated. They must not write moral essays or sermons. They must not dwell on death, disease, poverty, or other gloomy themes.

The great store-house of good themes for young writers is the outdoor world of nature or the events of animal and vegetable life; the



memories of holiday adventure. Each boy or girl can, any week in in the school year, write an exercise on such themes that no one else could possibly have written, because he has used his own senses in his observations and has stored his material in his own memory. It is in fact a crucial test of a class of topics that it secures compositions as various and individual in form and matter as the personality of the writers. Every youth can tell innumerable interesting stories about what he has seen and done. No one else has done precisely the same things. As a preparation for such writing, suppose you tell the class some simple observations or adventures of your own. There will be sure to be among the pupils some who will offer to parallel your story with one from their own experience. Perhaps they will show you that you did not observe closely or frequently enough, or that your adventure was tame to theirs. Once break the ice of dignity and converse with animation about squirrels, woodchucks, snakes, sharks, and the class will bubble with talk, which you, such is your pedagogic skill, can at once convert into equally bright and spontaneous writing. Not a pupil of either sex but will come to the lure of such a composition-topic.

While it is altogether wrong to send pupils for composition-matter to books, where they will find this matter already shaped in language, it is altogether right to send them for material into the fields and woods, where they find it appealing to eye and ear and soliciting original expression. It is easy to plan little inexpensive outings for Saturday afternoons, and to hint beforehand what may be seen at such and such a place. Boys need no such planning, of course. But girls do often need a stimulus to more out-door life. A composition that has to be evolved from one's consciousness or manufactured in a library will often fit too well into the daily habits of girls. If this exercise can be so planned as to give the girls more wholesome outings, even though these outings be on a very small scale, it will accomplish an incidental end very desirable in itself, as well as favor original and sincere composition-work.

Teachers whose work lies in cities have an unfailing resource in their search for good topics. In the winter, when the fields cannot be comfortably explored, the city streets are still passable, and here too is matter in inexhaustible variety for investigation and description. In Boston, e. g., are countless institutions of a public, or semi-public, nature, where visitors are always welcome and their inquiries always answered. Of these institutions many are devoted to purposes peculiarly interesting to girls. These are the hospitals of various

kinds, the homes for destitute children and for aged people, schools for the blind and the deaf and dumb, — a diversity of educational, charitable and reformatory foundations unequaled in many much larger cities. The citizens of Boston know much less about these institutions than they should and easily might know. Young persons are often surprised to find within easy reach so much to reward a visit. They are invariably received with courtesy by the officials, and come away with an access of knowledge. Often their sympathies are enlisted, and they have much to tell of cases of special interest that have appealed to their pity. In preparation for such a visit the teacher may suggest questions concerning the history, proprietorship, government, objects and support of the institutions, so that definite aims may be kept in mind and serve to prevent the visit from becoming a pointless reception of chance impressions. An indolent writer may endeavor to compile the composition from some of the numerous hand-books of Boston. But the composition must describe a real visit, made at a certain time, and must tell of things actually seen and heard, using the first person.

When knowledge is just gained, or is in the very moment of acquisition, then is the time for a composition. Then expression is natural and spontaneous. The pupil, like Sweno, the Norways' King, "craves composition." Herein the composition differs from the written examination, which also, in a manner, tests the pupil's command of language, but is usually perfunctory and complicated with anxiety and hurry, and also with laborious effort to remember and coördinate many bits of information.

The rule that a composition should be on a topic that interests the scholar generally forbids the selection of the topic from any department of school work. For in the very nature of the case, a subject that is concerned with marks and standing cannot also interest genuinely and vitally. The composition should be a connecting link between the manifold out-of-school interests and the proper work within the walls.

In the case of young persons striving to compose original matter, it is absolutely essential that the subject be thoroughly mastered at the outset. It must be ripe for expression. But, as has been insisted above, it must not be already formulated in speech, as historical and literary topics usually are. The learner must know very well what he saw or heard or did, and then he can go at once to his task of simple and direct reporting. The labor of ordering his language in all the

respects of correctness is all he can attend to at once. He must not be at loss for the *content* of his work, as his present concern is with its *form*. He must write his composition much better than he writes his examinations. One of the discouragements of English teaching is the failure of the most carefully taught classes to do as well on a final test, in which the topic is drawn from matter studied some time before as lessons, as they have done habitually on topics drawn from matter more immediately and vividly present in their minds.

A whole class can be almost instantly supplied with interesting topics, no two alike, by a device like the following. Announce yourself as editor-in-chief of an imaginary paper. Summon the class, — all the thirty-five or forty, — to act, for the nonce, as your reporters. Send this one to investigate the school library, to count the volumes, to inquire of the various teachers if it serves their needs, to learn what are its deficiencies, what its prospects of growth, what losses have occurred, and so on to any number of points. Send another to inquire about the course in drawing, what is the theory on which it is planned, what are the facilities possessed by the school in this department. In this way have every department investigated, statistics gathered, teachers "interviewed," the building explored, and the course of study commented on piecemeal. With a little thinking beforehand the teacher will easily find something for every member of his class, to report upon. This kind of topic has the advantage of giving every pupil *something to do*. This something is a tangible, concrete piece of business. Between the assignment of the theme and the presenting of the finished work, all the interim is a pleasant bit of occupation, without racking of brains, without soliciting unwilling Minerva. The set of compositions that come in will be found actually interesting, and pupils will remind you that you have not yet called upon them to read their "report." As you cannot, in such a case as this, omit this public reading, you must prescribe strict limits of length.

In fact, restriction as to length is wholesome on other grounds as well as in view of the time to be occupied in the reading and correction of the exercise. One of the commonest faults in composition-writing is delay in reaching the matter in hand, prolixity in developing the subject, dalliance with brave sentences that pique the writer's fancy and yet do not further the business of the moment. Long compositions should not be received at all. With limited time, restricted paper-area, and a topic to match, the pupil must study proportion and condensation. This is an invaluable discipline. Let us leave padding

to the magazines. Neither to the teacher nor to the class has a pupil the right to become a "devastator of the day."

The ultimate purpose of the school work in English is not to make essay-writers or to prepare fresh candidates for admission to an unhappy class of ambitious *littérateurs*. Therefore the precepts of formal rhetoric have but small relation to composition-writing. It is for the teacher to announce the doctrines of simplicity, clearness, choice of words and use of words, and to add impressiveness to his announcements by constant enforcement and illustration. It is an amazing folly to imagine that such rules receive additional force by being learned by heart from a book. We may hear little boys and girls repeating rules against the use of obsolete words! It will be time enough to preach against this, or any other vice of writing, when pupils begin to practise it. Encourage pupils to begin at once on their topics without formal introduction, and to stop when their matter stops, without a formal close. This is an age of redundant writing and printing. A nineteenth-century rhetoric has yet to be made. When it is made, it should have in view the needs of the busy million rather than the pleasure of the few antiquarians who still delight in beholding the literary forms of a past age painfully reproduced in the present.

The purpose of the school work in English is a very humble one, and as important as it is humble. The need of such work is recognized throughout the community. Every employer knows that it is difficult to find youth of either sex thoroughly trained in the essentials of good writing, who can, e. g., write a letter of unexceptionable shape at the first sitting. A good hand-writing is of more value to a young person to-day than any amount of rhetoric. Add to this, freedom, ease and correctness, and we have a really accomplished youth, who is sure to be desired. The charm of Latin, as a public-school study, is that it is useless and so never gets tested by practical men. The fact that the prevailing instruction in English is so generally criticized simply indicates the importance of this branch of instruction. Above all other teachers, the English-teacher should consider the hard facts of real life. What will his pupils be called upon to do? The Latin teacher, *as such*, is exempt from this inquiry. What he teaches is an accomplishment that will never be exercised beyond the walls of the school-room. Not so the English-teacher. Of him, more than of any other, is it true that his work is *non scholae sed vitae*.



## THE QUESTION OF ENGLISH.

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IN common with many teachers who had been struggling earnestly and unsuccessfully with the problem of teaching English, I looked for the prize essays on the subject in *THE ACADEMY* with much interest. They were stimulating and suggestive ; but the authors were principally college professors who did not seem to appreciate the circumstances under which secondary schools work, or, above all, the inherent difficulties of the subject itself. It is apparently the opinion of college professors that pupils should come to college with the ability to write easily a good English style, and with the ability to think rapidly and logically. In our best colleges they desire something of the training of the journalist, — that is, that the pupil should write, amid the distraction and excitement of an examination, in a single hour, and upon a subject upon which he had never thought before, an essay which should fairly represent his ability to think and to use English. It is plain that the secondary schools have not been able to meet this requirement, and it is still an open question whether it would not cost too much in case they succeeded.

Some of the tests to which secondary schools have been subjected do, indeed, seem to reveal great deficiencies in English composition. The much-talked-of prize essays of the Boston *Herald* do not show that the best schools in New England have attained to much skill in teaching the art, if the successful essay is a fair sample of what their pupils can do. But every teacher must feel that the test was not a fair one, for he can hardly fail to have had many better essays pass under his revision. The circumstances and excitements of the competition, and the character of the subjects selected, would certainly hamper minds as immature and of as few resources as those of the contestants must have been. The contest proved as much the lack of pedagogical skill on the part of the proposers as it did the lack of power on the part of the pupils who competed. We have no right to expect trained faculty in children ; and when we want them to do their best, we must give them a chance to work in accordance with their natures.

The colleges complain of the lack of attention to English on the part of the preparatory schools ; but they do not seem willing to do

much themselves to remedy the deficiencies of which they complain. The reasoning powers, as well as the sensibility to style, usually begin to awaken at about the time the pupil goes to college. The college is able to do more during the Freshman year to give him a command of good English and an appreciation of good style than the preparatory school can do in the two years preceding. An examination into the work in English actually done in some of our prominent colleges will show that they are at least as deficient in their duty as are the secondary schools. They are not hampered by many of the restrictions with which preparatory schools have to contend; and they have the aid of awakening faculties and the inspiration aroused by a new and higher kind of work. But the instruction calls for hard drill work on the part of teachers, and it is the opinion of many college professors that all really hard work should be done in the secondary school.

But though the way in which the colleges grapple with the subject of English does not justify on their part the screech which many of them make against the preparatory schools; yet, speaking now particularly of composition, there is no doubt that the work in English in our high schools and academies is not as well done as it should be. The subject has not in the minds of many teachers the place which it ought to have in a scheme of education. The time which must be devoted to it appears to pupils and parents unreasonable. The necessary criticism seems to the student minute and tedious, and his progress is discouragingly slow. It is necessary that the dignity and importance of the study of English should be elevated in the minds of the public if it is to get the attention it deserves. The colleges can do much to raise the standard of English work in the secondary schools by giving the subject an important place in their own courses of study. They should remember that the cause of the present state of things is that it has been as much slighted in the college as in the secondary school.

It has been humorously said, and yet with considerable truth, that a man's education should begin with his grandfather. The colleges complain that the secondary schools do not send them pupils properly trained; the secondary schools have a similar charge to bring against the grammar and primary schools; and these, in turn, complain bitterly of environment and parentage. The ability to use language well seems to depend upon a peculiar kind of mental maturity in the pupil—a maturity which is not always developed at the same rate as the maturity of other mental faculties. Some pupils have a language sense; they readily acquire the command of a good style. But very many find it

as difficult to get as the ability to reason correctly. There is no subject in which the same amount of training gives such different results in different pupils as that in the use of language. A school may have fairly done its duty by a pupil without his having much capacity to show for it. The persons who rail at the English work of the secondary schools do not seem to realize the difficulties under which they labor by being obliged to take human nature as they find it. In spite of the earnest efforts of many faithful teachers, a method of teaching English which will prove thoroughly successful with the average pupil has not yet been discovered.

The present lively discussion of deficiencies and methods will, it is hoped, do much to help teachers grapple more successfully with the problem. A few expedients which have worked well with the author may be offered as his practical contribution to the subject. The best material for composition work is that upon which the pupil's mind has been laboring the most vigorously. One reason why themes and essays are not more satisfactory is often because the pupil's mind cannot grasp hold of the subject. There is, so far as he can see, nothing substantial in it for him to hold fast to. He has little power of thought and invention, and he is employed in teasing his mind for ideas instead of being occupied with the proper work of composition. This is not to be remedied by making the subject for composition simple. The simpler the subject the fewer are the ideas to be found in it, and the more childish will be the theme produced. I have obtained the best results in matter and mode of treatment of essays, and as a natural result in formal literary excellence as well, by making the composition work a part of some of the school studies. Topics were assigned which called for the use of knowledge which the class had just been acquiring. For example, a rhetoric class wrote their best essay upon the topic, *Elegance of Style*. The subject of elegance had just been studied in the book. The class had illustrated it by examples which they had gathered from different sources, and these had been read and discussed in class. The teacher had contributed his part from other authorities and from his own reading. The class were then told that their next work would be to gather the results of their study together into an essay which should explain the subject to one who had never studied rhetoric. These essays were not only better than those which the class had written from outlines constructed according to the text-book, but they had the additional advantage of clarifying in the minds of the pupils the subject which they had been studying.

A class in English history wrote some long and really excellent essays on the career of William of Normandy. A physical geography class took a lively interest in the subject of Earthquakes. A class in American history had a series of essays assigned them which gave a good outline of the history of the country in sketches of the lives of its famous men from Columbus to Lincoln. The special topics in history and literature in the Regents' examinations have furnished me with some excellent subjects for composition, as the pupils have an extra stimulus in this case to make their preparation thorough. I gave, as a school examination in English literature, an essay on the History of the English Bible, with some account of the men who had been concerned in translating it, giving the class a whole morning to do the work and allowing them to consult the encyclopædia for any fact which they could not remember. This examination produced a set of essays which showed a solid grip upon the subject that was gratifying. One great advantage of such a method is that it gives the work in composition a vital connection with the pupil's other studies. It no longer seems to him a mere mental gymnastic, a sort of practice in the air, which he must go through with to satisfy his instructor.

In order that such exercises may not seem to be a burdensome addition to his work, they should be recognized as part of his regular study in a subject. I allow such an essay to take the place of one and sometimes two regular lessons. To be of value these must be real essays and be criticised as such. The method of some teachers of having written recitations in which pupils write down rapidly a quantity of matter for the form of which they are not held accountable and upon which they do not expect to be carefully criticised is productive of careless habits and should not be allowed. I have not been able to have these exercises as often as I would wish, owing to the large extra labor of revision.

It is important sometimes to have compositions written out in full in the hour of the composition class. I have obtained better results in this kind of work by giving some specific directions as to the contents of the essay—throwing out, as it were, some guide-lines for the pupil's work. For example, the directions for the first composition exercise of a high school class this year were: Write a composition upon Christopher Columbus. Tell who he was; any incidents you can remember of his early life; his theory of the earth and his efforts to prove it; how he came to be successful; his voyage and its results; his other voyages and after life; the effects of his discoveries.



I find it sometimes advantageous to devote a recitation to making out in a composition class a framework of an essay, having different pupils contribute what ideas they can, and finally gathering these into an orderly arrangement from which they are to write for the next recitation. I notice, however, that few persons who are actually engaged in the work of productive composition do their writing from prepared frame-works.

The great problem in teaching composition is that of criticism and revision. It requires so much labor on the part of the teacher, and it is so difficult to get the pupil to apply his mind to it with the vigor and interest necessary to cause any genuine progress. There is usually a lack of the movement and spirit with which in a lively recitation other subjects are reviewed and corrected. The ideal method is to go over the essay with the pupil, helping him to find his own faults as far as possible, and giving him the reason for every correction that he is not able to make himself. In the great majority of public schools, however, there is little time for such work, and the most of it that is done has to be done by detaining the pupil beyond school hours, a proceeding which makes him regard the whole thing as a bore. The number of essays to be corrected usually forbids the work except in case of a few pupils.

There is a certain class of errors in composition work which a pupil will understand as soon as his attention is called to them. He makes them because he has not yet got into the habit of careful observation and of taking pains. It is sufficient to indicate these by appropriate marks in the margin. The great trouble is with the formless, sprawling, unrheterical, ungrammatical sentences which contain what he considers to be his best writing. I have found no way as effective in dealing with these as to write them upon the blackboard and have them criticised by the class, allowing, of course, no one but the author to know from what essay a particular sentence or paragraph was taken. After three or four pupils in succession have failed to put a sentence into good form, the minds of the class will be aroused and they will grapple with it with vigor as a real problem. When the class have done their best with a sentence, the teacher makes what additional corrections or changes he can, and it is left in the best form which their united efforts can give it. It may take a number of lessons to criticise a set of essays in this way, but the whole class labor upon every sentence corrected and get the benefit of all the criticism.

I have been able to get some help in English composition by call-

ing for written translations from the classics. Here, as elsewhere, the labor of correcting the exercises has been a bar to a large amount of written work. A plan that has succeeded very well is to divide the lesson among a number of pupils, assigning a brief section to each, and to have it written out upon the blackboard. The class then close their books and criticise the translation as an exercise in English composition, the teacher calling attention to those places in which it does not adequately represent the original. This exercise is better upon a review lesson, as the pupil has then mastered the meaning and can pay better attention to the expression.

A method which sometimes yields good results is to have an essay written out during the composition class and laid aside for a time without correction. It is then returned to the pupil with the direction to rewrite it during the composition hour, making all the corrections he can and putting it in the best form possible. The two drafts are to be returned to the teacher for comparison, though, of course, only the latter is to be criticised. The pupil is often surprised at the mistakes he has made, and he will correct many which at first he let pass without thought. This will materially lessen the labor of the teacher in revision, and will help to awaken in the pupil a keener critical sense.

It is well to cherish a high ideal of English expression, but we shall probably not be able to reach it with the great majority of pupils in our secondary schools. The ability to write a good English style, to express one's thought accurately, forcibly and well, is one of the results of an education, and it cannot by any arrangement of our educational machinery be had at the beginning. Still, the secondary school furnishes the educational equipment of the great majority of intelligent people of the country, and it must give them the ability to write English if they are to get it at all. We shall do more in this work if we recognize its difficulties, and set about it as a substantial division of the most important subject we are called upon to teach. Perhaps a frank recognition on our part of its difficulty and its importance will help the public to appreciate it better, and will stimulate them to give us the opportunity for it and the assistance in it that we need.

## LOGIC WITH RHETORIC.

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THE Trivium of the old universities included grammar, logic, and rhetoric, and their study led to the bachelor's degree. By the lenth term of the third year, the student, now called a general sophister, was supposed to have read all that was required in these subjects, and was adjudged competent to enter into disputations with his seniors. The debates were in Latin, and all the arguments were framed as syllogisms. Coming as they did from students of the maturity of entering freshmen of the present time, "maintaining an act," as it was called, was not unfrequently a formality and a farce. But able students often showed unusual power as a result of this training and the attending incentives. The publicity of these debates and their set place in the curriculum gave stability to the system. The objectionable part lay in the absurd requirement that the discussions should be conducted entirely in Latin, thus placing the student at a great disadvantage in expressing his ideas. In addition, the too rigid adherence to the syllogistic form made the discussions formal and took some of the life out of them, though it had the decided advantage of keeping the disputations *on the question*. An effort was made at one time to have these objectionable features removed, but it failed, and the custom gradually fell into reproach.

In our present system of education, logic and rhetoric are no longer found together, the former being remanded to one of the later years in the college curriculum, while rhetoric is usually and properly taught very much earlier to high school or preparatory students. Logic is regarded as coördinate with the branches of mental philosophy, and taught along with them. Now, while this is no doubt a correct view to take of formal logic as a whole, it seems rather irrational to avoid teaching any of its principles simply because they cannot all be taught. Logic, as the science of the laws of thinking, bears much the same relation to thought in general that mathematics does to physical science. But mathematics is studied in systems of education almost from the first. It seems strange that adaptations at least of logical conceptions and methods should not be introduced into school curricula and taught along with literature and science. In Ohio, in the year 1887, out of a total enrollment of 767,000, there were just thirty-four engaged

in the study of logic, this subject being at the bottom of the whole list, as regards the number of students taking it.

It has been asserted that logical rules are not necessary towards the acquiring of the elements of science ; that man exercises his understanding before he is formally instructed in the rules of reasoning ; and that upon these grounds logic should be considered to belong more naturally to the last than the first part of a philosophical course of education. But this was written of the one-sided logical development which held closely to the syllogistic forms. It was seen by sagacious teachers that such a study could not be made of much utility to students, and the method of teaching was greatly modified. Later still, it was seen that a distinct advantage could be gained by introducing more and more the fundamental principles of psychology. In the early part of this century, largely through the efforts of Archbishop Whately, the study of logic was restored, in a measure at least, to its former importance. Then, in his *Rhetoric*, Dr. Whately gave a sort of elementary course in logic, making many references to his work on that subject. This plan has been followed to a greater or less extent by many writers on rhetoric since Whately's time. However, unless I am misinformed, the present tendency of teachers and writers is either to avoid altogether the treatment of the logical side of rhetoric, or to slur it over with a very brief consideration. The reason for this is, perhaps, two-fold : first, that logic will be learned *in extenso* further on in the course ; and second, that the subject is inherently difficult for beginners, and for that reason, objectionable. But the first of these reasons does not apply to by far the greatest number of the students of rhetoric, who, if they do not learn something of what logic contains in their elementary course of study, will never learn it. As regards the other reason, it is hardly a valid one ; for it is not necessary to go into the refinements of the subject to give that which will be of the most value to the young student. There is a large quantity of material in logic which is easily communicable. Not a little of this is made up of topics related to the general subject of logic and usually taught in it, which are not likely to be found elsewhere. Moreover the subject would have to be taught very largely by copious and suggestive illustrations and exercises, rather than by formal statement. These are found necessary in other branches of education, and it would be foolish to think of dispensing with them in a subject of such great generality. It will give definiteness to the foregoing to enumerate some of the topics which could receive brief



treatment: the two great methods, Deduction and Induction; logical terms, such as *a priori*, *a fortiori*, *a posteriori*, etc.; intuitive and empirical proofs; analytic and synthetic proofs; explanation of the simpler forms of the syllogism; words and objects; conceptions, judgment, reasoning; definition, essence, property, accident; non-sequence of converse; arguments by analogy and their validity; evidence and testimony; fallacies; etc.

It would be preposterous to pretend that a course of this kind would ensure those who took it against mistakes and errors. And yet it would serve as a constant reminder of the ever present danger of using weak or specious arguments or of being deceived by another's use of them. To those who are not on their guard there is no lack of opportunities to be deceived. In everyday life what can be of more practical value to anyone than the ability to weigh and answer the many questions which are continually coming up in the most unexpected ways and varied forms. Questions of conduct, of social order, of politics, of religion and the thousand and one problems that arise from day to day; some of the most complex nature, others simpler, but still difficult, all crowd for solution. He must be a keen thinker as well as a well-informed man who can hope to pass tolerably accurate judgment on all these questions. Any study calculated to enable one to classify the different species of questions and the different kinds of proofs is, in the nature of the case, of great value to everyone.

In urging the importance of training in logical distinctions one has to be afraid of being misunderstood as regards the importance and value of the different branches of knowledge as they are now taught. In what has been said nothing of under-estimation of the value of the separate studies has been intended. Indeed it is only as some branch of science has been well taught that one can hope for a rational understanding of the principle of induction; and only as algebra and geometry are appreciated is deduction well understood; and only as language is well learned is accurate thinking possible.

There is a vast deal of poor reasoning going on in the world. If we were not such poor reasoners we should be better men in every way. I grant that prejudice is as great an evil as ignorance. But prejudice is a form of ignorance, viz., judging without materials on which to base the conclusion.

It may give point to the preceding to indicate a few palpable but common errors.

Perhaps the most important among all classes of faulty reasoning is

that in which general conclusions are drawn from grossly imperfect inductions. The farmer, after an experience of two or three years, begins talking about the advantages of plowing deep or plowing shallow, sowing early or sowing late, cutting green or cutting ripe, and so on, forgetting that a dozen other things united to produce the crop, each one of which may be of as much importance as the particular one which he had carefully noted, while a thousand accidents, as rain or sunshine at particular junctures in the growth of the crop, may have contributed a very large constituent in the total result. So likewise with the condition of trade. Much can be learned by experience, but it must be observed with great breadth of view. Perhaps the reader is thinking within himself or herself, that this way of reasoning may be found among certain classes, but that it is not true of the better informed men who wield by far the greatest influence. Unfortunately the better informed class, by a characteristic human frailty, are singularly prone to think and talk on subjects with which they are not very familiar. To give an example, we refer to certain assertions made by Mr. Andrew Carnegie, the well-known manufacturer, in regard to college men in business. Mr. Carnegie says, "I have lately noted the total absence of the college graduate in every department of affairs, and I consider it a matter which should be deeply weighed. I enquired and searched everywhere in all quarters, but find scarcely a trace of him. It is the poor clerk and the working mechanic who rule in every branch of affairs, without capital, without family influence, and without college education." When we call to mind that about one-third of the House of Representatives, at Washington, and nearly one-half of the Senate, are college graduates, and very many of these successful business-men, the absurdity of Mr. Carnegie's statement becomes evident. Of course this is but a single instance of a hasty generalization, and is intended to have weight merely as such. By its nature, the assertion made above concerning the mistakes of well-informed men would be very difficult of proof. One can only appeal to extended observation to justify the statement.

Another error consists in assuming general rules to be of universal application, and upon evidence of failure in particular cases, concluding that they do not hold in any sense. Thus, the number of those who would be influenced by the following argument is far from being small: An extended course of study is a special advantage to fit a man for success in life. This is usually thought of in the form an extended course of study is necessary to fit a man for success in life, and the contrary of this last is easily proved by citing a few well known

examples of successful men who have lacked the advantages of an education. Alas, how often one hears the expression, "that is not true, for I know of an instance," etc., forgetting that disproving the universal application of a proposition does not necessarily disprove its general truth. If such persons but knew the ugly Latin expression which characterizes such faulty arguing, they would not be guilty of it. Ignorance of what constitutes a refutation is almost, if not quite as great an evil as the urging of direct non-sequiturs.

Cause and effect is a great stumbling-block. If a result follows closely upon an antecedent, there is danger of the latter's being looked upon as the cause of the former. Thus, recovered invalids are accustomed to think it was the last medicine which they took that helped them, whereas it may really have been *vis naturae* at last given a chance by reason of the weakness of the remedy. Dr. Samuel Johnson remarked that "the one prophetic dream which comes to pass is remembered and spoken of, while the ninety and nine which failed of accomplishment are forgotten." On the other hand, abuses which do not soon produce their effects, but are rather cumulative, are usually entirely unobserved. Such are indiscretions in the care of one's health, growths of any kind, or the like.

Arguments from analogy are great pitfalls to the unwary. They may reach the measure of moral certainty sometimes, but usually, as is well known to students of logic, they are to be regarded with much distrust. If abundant illustrations were given of their great capacity for plausibility (if such an expression may be allowed), as also for misleading inference, the student might easily be led to scrutinize very closely all such arguments. Mill refers to the following false analogy: "The favorite argument in defense of absolute power is drawn from the analogy of paternal government in a family, which government ought not to be controlled by the children. Paternal government in a family works well, therefore, says the argument, despotic government in a state will work well, implying that the beneficial working of parental government in the family depends upon the only point which it has in common with political despotism, namely irresponsibility. Whereas it does not depend upon that, but upon two other attributes of parental government, the affection of the parent for the children, and the superiority of the parent in wisdom and experience."

Then again as the Duke of Argyle, in his "Reign of Law," observes, what many another philosopher has asserted, or at least felt, "half the perplexities of men are traceable to obscurity of thought hiding

and breeding under obscurity of language." And so one might go on naming many different errors all more or less self-evident when formally stated. As was intimated before, it is here intended to give no more than a few homely illustrations of different kinds of current errors. Perhaps a few of these classes would include by far the greatest number of errors, though of course the number of all the different kinds would be legion. The student being taught the habit of applying practical tests, particulars would be likely to take care of themselves. Among the volumes written by the geometer Euclid, was one on fallacies, which he intended to be used as a kind of hand-book in the study of geometry. Proclus says, "he gave methods of clear judgment the possession of which enables us to exercise in the detection of false reasonings and to keep from delusion those who are beginning geometry. The book which gives this preparation it called *Pseudarion*, in which he enumerates the species of fallacies and exercises the mental faculty on each species by all manner of theorems. He places truth side by side with falsehood and connects the confutation of falsehood with experience. If such a book could be of real value to Euclid in a limited sphere, why not have a book of fallacies of a much wider application?

It may be thought that in order to illustrate errors of reasoning in such subjects as sociology and religion, debatable questions would have to be introduced. But such is not the case. Such errors as are here meant could be abundantly illustrated without at all entering the region of the doubtful. There is no difficulty in finding illustrations of fallacies in works on logic. Neither need the life be taken out of the examples by any excess of formality in their nature or statement. There certainly need be no lack of exercises and no question as to the validity of the solutions given.

Much every way depends upon our ability to displace error in the world, and particularly is this necessary in a free form of government. In the present day, the whole body politic is a seething mass of original thinkers, thinking away to the best of their knowledge and ability. Each new *ism* that comes along gains adherents, however remarkable its principles, or radical its designs. Should not every precaution be taken to save men from a possible stultification, and would not a little elementary logic have value as a remedy? I beg the reader to decide in his or her own mind whether this position conflicts with the idea that education is the best remedy for the ills aimed at, and whether the study here suggested with other branches would not have an advantage over the others *without* it?



## TEACHING CIVICS.

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IN civics, as in other sciences, it is important that we keep in mind the distinction between the art and the philosophy. By the art of government is meant practical acquaintance with its forms and details, that would qualify one to manage any part of it, from calling a caucus to presiding over a house of congress; by the philosophy, an understanding of the history of political progress and of those underlying principles which are constantly compelling changes in forms and details. Attaching undue importance to the former produces the politician, to the latter, the radical; a just regard for both, the statesman.

People in general, especially immature people, whether youth or adult, are greatly attracted by forms, as witness the influence over rude nations of religious ceremonials; hence in teaching civics, it is easier to excite an immediate interest in learning the *how* than in digging out the *why*, and therefore teachers are more disposed to limit their efforts to it.

To this partial treatment of civics the objection is to be made that the school is only teaching the pupil what at the proper time he will pick up for himself from experience, and is therefore devoting time to the needless work of teaching nestlings to fly. If the school does not develop in its pupils a disposition to investigate and appeal to those fundamental principles that in the hustling of life (especially American life) are likely to be overlooked, it will be making a poor return for the time and money it costs.

Another objection is that when a partial phase of a science is taught to youths, it is apt to leave on their minds the impression that it is the whole, or, at least, the most important part of that science. This is especially true in civics, and an undue attention to forms is in a measure responsible for the fact that in this country, where the study of economic and civic questions is supposed to be well-nigh universal, the legislatures contain a thousand politicians to one statesman; a thousand, for example, who know the way to assess and collect taxes, to one who knows the principles of taxation; or, for that matter, that taxation has any principles unless that of Donnybrook Fair.

I have said that the study of forms is the easiest way to excite an

immediate interest. This interest, however, will last only while the pupil can be confined to memorizing and taking all he learns from authority. When once initiated into the exhilarating delight of thinking for himself on civic questions, he will take a most nutritious interest in the subject, and as early as fourteen (I have not had experience with younger pupils) will think out and comprehend all the fundamental principles of civics.

In speaking as I have of forms and details of government, I would not be understood as disregarding them altogether. But I would subordinate them in the pupils' minds, as they are in fact subordinated, to the more important principles of equity and convenience ; principles that should underlie all forms, and alter them when necessary.

Keeping these thoughts in mind it will be easy to see the drift of the method of study by which I believe the best results in civics can be obtained.

Let us suppose a class in civics possessing a general knowledge of the history of the country and state, and a more or less definite idea of a town or city from his acquaintance with the place where the pupils dwell. For the purpose of this paper I will assume it to be a town.

As a first lesson I would submit to the class, for them to investigate and think about, such subjects as the following : the need of government ; the different kinds ; to what conditions of society each is best adapted ; the result where part of the people are fitted for a more advanced form of government than that best adapted for the majority ; whether all our own people are fitted for our form of government ; whether there is any danger that the unfit may increase so as to imperil it ; the remedies.

The lesson would be likely to extend through two or more recitations, and the pupils should be referred to books containing accounts of the governments of a few countries, as China, Russia, Germany, Great Britain, and the United States ; reports and addresses on immigration and illiteracy ; patriotic and educational addresses by prominent men, and, if possible, the tenth annual report of the Massachusetts Board of Education by Horace Mann. The good material for such references is ample. The recitations, at first at any rate, should not be daily, but say twice a week. On the day preceding each recitation, however, each pupil should be required to hand in a written statement of what he has read, and the topics he proposes to discuss.

The recitation will be chiefly devoted to the presentation by the students of their views, and each should be encouraged to give his own

conclusions, fortified by facts. It will have somewhat the tone of a deliberative assembly. The teacher, however, should not be merely a presiding officer. He should hold the attention of the class closely to the subject in hand, and keep the speaker from rambling. If he does this carefully the scholars will not only be gathering useful points in civics, but will be forming correct ideas and habits of debate, and in the use of language.

The teacher should also see that important factors to a full understanding of the several questions are not overlooked. But he must not be too eager to give information directly. When possible he should bring out the points desired by skilful questioning. In case, however, he thinks that he can arouse new interest or throw new light on the subjects by the recital of some historical experience, he may do so, taking care to make his address a model for his pupils.

If a pupil advances ideas that in the teacher's opinion are wrong, he should not be driven at once to the wall, but questions should be propounded to him for reflection that would be likely to lead him to see his error. An opportunity should be given at the beginning of each recitation for any who have changed their previously expressed views, to explain their change. The teacher who has not tried this method and seen the interest, even enthusiasm, which it will awaken, has a great surprise in store for himself.

These general questions having been sufficiently discussed, the consideration of towns will be taken up, and, to guide the investigation, the teacher will submit, as it proceeds, such inquiries as these: What is a town? how is it governed? what are its principal officers and how are they chosen? how are appropriations of money made? how is the money raised? can the people expend it in any way they choose? are there any things that a town may or may not do? any things that it must do? what is the compelling power? why should not the maintenance of schools, roads, etc., be optional? how can the equity of taxing property owners who have no children, for the support of schools, be defended? the equity of making the people of a town defray the entire cost of maintaining a road much travelled by the people of other towns: if by a defective highway a man who neither lived nor paid taxes in the town, was injured, what should be done? would it make any difference in equity if he lived and paid taxes in the town? the disadvantages of town government in large places: the remedy. These and other questions and supposed cases involving opinions in justice and equity may be submitted till the teacher is satisfied. These

questions should be submitted not all at once, of course, but gradually. The investigation of them should be conducted as already described. The reference books need not be many, but a copy of the public statutes should be among them. The pupils should get as much as possible of the information from the affairs of their own town.

In the same way the inquiry should be extended to the city, the county, the state, and the federal government by steps which the limits of this article will not permit me to detail. In connection with the state the subject of direct taxation will come up. Considering the importance of this subject and the slight attention paid to it in schools, I cannot pass over it.

After the pupils have learned our present methods of direct taxation, tested them by the light of Adam Smith's four maxims, and compared them with ancient methods (which the teacher may explain to them in an address), they should have such questions as these presented to them for discussion:

1. Mr. A's entire property consists of ten houses, assessed at \$2000 each, which he rents to B, C, D, etc. Who actually pays the tax on these houses? Does Mr. A pay anything but a poll-tax?
2. Mr. A's farm is assessed for \$3000 and there is a mortgage on it for \$2000; would it relieve Mr. A any if he was only taxed for the \$1000 balance, and the tax for the \$2000 was placed on the holders of the mortgage? If the farm was taxed for its full value and the mortgage was taxed besides, who would have to pay these taxes?
3. Mr. A's farm is taxed for \$4000, a value determined by what it produces; should the product such as hay, cattle, etc., be also taxed?
4. Mr. A and Mr. B have lots of land similarly situated in a village, the former unimproved. Mr. B improves his and makes it an ornament to the village; should he be taxed higher than Mr. A?
5. What is the moral effect of taxing bonds, stocks, mortgages, and other concealable property? Is it not double taxation?

The pupil will be a dull one who does not show interest in these discussions.

When the Constitution of the United States is studied in this way it becomes intensely interesting and productive of results. Step by step it should be compared with the Articles of Confederation which it supplanted, its superiority pointed out, and scores of cases supposed which the pupil must decide by appealing to the exact language of the compacts.



In about eighty such lessons as these, or in about forty weeks with two recitations a week, the whole ground of civics can be pretty well covered. On alternate days, history should take its place, and the two should be made to throw light on each other. In fact, history is but a branch of civics, and should be so treated.

I have refrained from naming many books of reference partly on account of the limits of this article, partly because old standard works such as *The Federalist*, and the writings of Judge Story, are known to all, and partly because I did not wish to make distinctions between the many good books at hand. I may be pardoned, however, for saying that one such book as Cooper's *American Politics* will be found very valuable. One advantage of this method is that it acquaints the pupils with standard works and authors. If any object that it requires a large library, I would answer, not very large either; but such as it does require it should have. To do anything right one must have proper equipments. The method has this to recommend it, that it is in keeping with the purpose of studying civics, and differs from that in studies that have a different purpose. This is as it should be. Scholars will not leave school with the impression that there is but *one* way to learn.

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### *INVENTIONAL METHODS IN TEACHING GEOMETRY.*

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FLORENCE BALDWIN, BRYN MAWR, PA.

BEFORE making the experiment I am about to describe, I had always tried to make my pupils as independent of the text-book as possible, or rather, as, up to that time, I had supposed possible: and to this end, I had urged the class to attempt demonstrations of their own before looking at the text, and had required original demonstrations of additional theorems. When I saw how often a class, brighter, perhaps, than the average, succeeded in finding satisfactory demonstrations for themselves, and when I noticed the pride and interest they took in whatever they felt to be their own by right of discovery, I began to wonder if I could not go farther in the direction indicated, and, by banishing the book entirely, increase this feeling of ownership in the results of their study. Just about the same time, I came across a little book on *Inven-*

tional Geometry, by Wm. George Spencer, and found it confirmed my own suspicion that pupils could walk instead of being carried, if only they had an intelligent guide, instead of a porter. So the next year, although the class was supplied with books (as a convenience in cases of enforced absence, but by no means as a necessity), we started with the fair understanding that the books were never to be looked at without permission from me. This, doubtless, presupposed moral trustworthiness in the pupils; but low indeed, must be the moral state of those who cannot be educated to a sense of honor in this matter.

For the first lesson we talked over the elementary definitions usually given as a foundation for the theorems of Plane Geometry; the effort on my part being to draw out the ideas of the pupils themselves, to show them the absurdities to which incomplete and incorrect definitions lead, and, finally, to bring them to the point of giving a clear, satisfactory definition in exact language. These definitions they noted down and handed to me the next day, neatly written in their blank-books, which were also to contain the theorems. Then I wrote the first theorem on the board and tried by questioning to elicit the demonstration from the class. Of course they hardly knew what I was after, and needed much help from me.

As each point was made, I wrote it on the board, making sure that each pupil saw clearly what we had already gained, and what remained to be done, before we took up the next point.

When we had a clear and logical demonstration, I erased the work and told the class to write it out neatly and bring the books for my criticism the next day. I did the same with one or two theorems more, but was careful not to give more than I had a right to require should be done perfectly and told them that after they had done their own *best*, they might compare it with the book, to see where they could have gained in exactness of expression. But throughout the course, they never looked at the book until they had succeeded in producing a demonstration of their own. They brought their failures into class as honestly as their successes.

At their next recitation the pupils were called upon to demonstrate these theorems at the board, and they were made to feel that there was no forgiveness for false logic or loose statement. Then we worked out one or two new demonstrations together, as on the day before, the class feeling that the burden of proof lay with them, while I was careful never to come to their rescue until they were absolutely at the end of their own resources.

Finally, two or three theorems were simply stated, which they were expected to demonstrate out of class, and bring in the next day.

After this, I omitted helping them in the advance work, although I occasionally needed to give a hint in advance in regard to construction lines, my object being never to give unnecessary hints, and, at the same time, not to allow any one to become discouraged.

Each day's recitation consisted of two parts: the first, the discussion of the original work done since the last recitation, and here they knew that all charity would be shown for failure. It was the honest, earnest effort that I expected, not at all invariable success. The second part was devoted to a review of the work that had been discussed the day before, and here no mercy was shown, or help offered by the teacher.

Whenever they had worked out a demonstration satisfactorily to themselves (and they soon became quite as critical as I, in regard to logic and expression), they wrote it out for me to look over.

When their own efforts were not successful, they deferred the writing until a more successful classmate or the teacher had supplied, in class, the missing link. By the end of the year, each girl had written out, not copied simply from the book or her own notes, a demonstration of every theorem given in Wentworth's *Plane Geometry*. For that textbook was recommended by the colleges for which I was preparing the class; but I used the wording of Chauvenet in giving the more remote review which I endeavored to bring in for a few minutes each day. For this review they did not prepare, my object being to prevent the feeling that they could comfortably forget any demonstration they had once been over, and could study it up again when necessary.

There were some theorems, as those by which the numerical value of  $\pi$  is found, that I talked over beforehand with them, but even then always waited until they had seen as far as they possibly could with their own light before I shed any more on the subject.

The class had an hour's recitation five days in the week, and were expected to spend only an hour in preparing the lesson, and I could not ask for a minute over that hour. Working in this way, it took from the first of October to the first of June, three weeks of vacation intervening, to prepare a class so that some took, successfully, the entrance examination for Harvard, and one for Bryn Mawr. The Bryn Mawr candidate had been placed in my class at the beginning of the year with the remark that she had "never liked nor been able to do anything with mathematics," and yet, among those who took the entrance examination in geometry, she stood highest. I mention these

facts because they meet the more common objections that have been made to the method. I am convinced that the amount of geometry learned by it cannot possibly be less than when text-books are relied upon. When more work could be demanded out of class, the time given to the course could be shortened; but if I could have the arrangement of classes in my own hands, I would prefer the more leisurely plan.

One advantage of the new departure I found to be the increased enthusiasm of the class, caused by feeling that they were doing real work, not simply putting their feet down in the well-worn foot-prints of another, and the interest in geometry that resulted was incomprehensible to their parents and to those brought up on text-book geometry alone.

For the teacher it was an intense pleasure to stand before that class and watch the thought, at first vague and uncertain, leap to sudden and exact expression. The scholars expected to see into things, then and there, which were presented to them for the first time, and instead of having an aggrieved feeling when held accountable in class for work they had never been over before, they would fall upon a knotty problem with enthusiasm and confidence in their own mental power.

The hour of recitation was utilized more fully than before, for each pupil was thinking hard every minute of the hour, and had advanced mentally by an hour's work when she left the class.

The moral gain was as great as the intellectual. The quick temper, that usually fretted like a restive horse when all was not clear at a glance, was curbed while a demonstration was patiently thought out; the order of mind that usually comes up like a bucket to be filled by teacher or book was shamed into bringing something into class as well as taking something away. The habit of quiet and intelligent attention to another's argument was acquired, and carelessness, both in thought and in minor details, was brought to light and cured.

Of course all earnest study must produce these results, but they are enumerated here because in my own experience they can be produced far more readily by this method than by the use of a text-book.

The same method has since proved equally satisfactory with other classes, the amount of help needed from the teacher varying with the class. The poor, fumbling wits of slower scholars were not nearly so hopeless in this way of working as in the old. True, they never became shining lights, but they did a little original work each day, and at least found out the exact spot where their own mental machinery



broke down. As a result they were grateful for help when it came, and could use it intelligently.

When I came to apply the same method to solid geometry, I was met by a new difficulty, the lack of power in the ordinary student to conceive of three-dimensional space; this, too, in pupils who had more than an ordinary preparatory-school training in free-hand drawing. I found myself obliged to give more suggestions than in plane geometry, but I am convinced that this could have been avoided by a systematic preparation for the higher work in the under classes. I have already spoken of the very suggestive work on inventional geometry written by the father of Herbert Spencer. Problems of like nature with those given by him could be given in connection with even the most elementary arithmetic, to the exclusion, if need be, of one example each day on apples and potatoes.

To show the range of problems, I quote at random: "Say how many dihedral angles a cube has?" "Can you draw one line perpendicular to another line, from a point that is in the line but not in the middle of it?" "Can you make, in card, a tetrahedron whose four surfaces shall be unlike in form?"

I have seen pupils varying in age from ten to twelve years greatly interested in bringing into class figures drawn both to the metric and to the English scale whose areas represented the product of the integral factors of some number given by the teacher, as twelve or fifteen.

An astonishing variety of rhomboids, rectangles and triangles, neatly and accurately drawn, were produced with modest pride by their small designers.

This sort of training, accompanied by mechanical drawing, need not take up a large amount of time each day; only let it be progressive and constant, so that the pupil when he comes to geometry will be supplied with material for thought, since he is already familiar with the practical side of that which he now deals with abstractly.

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THE friends of the late Mr. W. H. Ray, of Hyde Park, Illinois, are preparing a memorial volume to be published soon. Readers of *THE ACADEMY* know our opinion of Mr. Ray, and this book is only a fitting tribute to his merit and his work. The price of the volume will be \$1.50, and orders should be sent in advance of its publication to Mr. H. W. Thurston, Principal of High School, La Grange, Illinois.

## ÉCOLE ALSACIENNE, PARIS.

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W. L. MONTAGUE, AMHERST COLLEGE.

DURING a recent sojourn of several months in Paris, I was introduced by a friend to Mr. F. Rieder, the Director of the Alsacian school. He received me very courteously and invited me to visit the school and witness the examinations. I gladly accepted his kind invitation, met several of the professors, saw the pupils in the class-rooms, at their studies and examinations, in the gymnasium and at recreation, and thus became acquainted with the history and work of the institution.

This school does not belong to the University of France, but is one of the most important of the private schools in the country. It has borne a prominent part in bringing about the reforms in education which have been accomplished during the past fifteen or twenty years. These reforms arose from dissatisfaction with the management of the state and communal colleges, particularly in regard to the severity of the regulations governing the "*internes*," or boarding scholars, and the narrow programme of studies based on the old traditions respecting Latin and Greek. The state was content with following the beaten track. Teaching was summed up in the almost exclusive study of the ancients. "The dead were presiding over the intellectual culture of the living." Some minds, aware of the wonderful progress that had been made in every sphere of human activity and thought, proposed a modification of the course which should render it more interesting and efficient. They desired to combine with the classical course and its mental gymnastics, the thorough teaching of the living languages which should contribute both to general culture and to more practical results. In place of the gloomy dormitories and annoying surveillance of masters and unsympathetic teachers, they would substitute a sort of family life, with the most cordial relations between teachers and pupils. These views were warmly advocated by competent teachers, by members of the University, and by officers of the government.

The *Ecole Alsacienne* was founded in 1873 by men who were in sympathy with these views. They were heads of families, scholars and business men, and, with few exceptions, originally from Alsace. They formed a business corporation in 1874, under the direction of a Council of Administration and a Committee on Studies, composed of eminent men of high culture and progressive views.

Since 1881 the school has occupied a fine situation in one of the most airy and healthful sections of the city, near the gardens of the Luxembourg. The buildings occupy the space between two parallel streets, and include two large gardens and three courts planted with trees, which give to the place a rural aspect. The class-rooms are large, high, well ventilated, and arranged on hygienic principles according to the most approved theories of modern science.

Most of the 246 pupils are "*externes*," or day scholars, but some are admitted as boarders in the family of the Director, or of some of the professors who lodge in the building, or in houses adjoining, which also have attractive gardens. The policy of the Director was to substitute, as far as possible, the comforts of family life in place of the hardships of the boarding school as they were then experienced in most of the educational institutions in France.

The work of the school begins at half past eight in the morning and closes at five o'clock in the afternoon. There are two hours of intermission in the middle of the day, and ten or fifteen minutes for recreation between the exercises of the class-room.

The discipline is that of a family rather than of a college. The pupils work with their teachers. There are no "masters" to watch their studies, no privation of privilege, no offensive tasks, but friendly counsel by the professors, warnings from the Director, and "notes" of conduct. The sentiment of responsibility takes the place of the rigid principle of absolute authority.

Examinations occur every fortnight and at the end of the year. The latter are conducted in the presence of the Council, the Committee on Studies, the parents and others interested in the methods followed in the school. At the end of each term the pupils are classified according to their notes of compositions, examinations, work and conduct. At the end of the year a public report is given to those pupils who have obtained in the final classification the note *good* or *very good*.

Every week there is an excursion of one of the sections to a museum, the Garden of Plants, or to some manufactory. In connection with it the professor gives the class an object-lesson of which the pupils must write a report.

Special attention is also paid to physical exercise and to the development of the powers of the body. The school has a large gymnasium, amply furnished, in which all the pupils receive special instruction from able and devoted professors. These pupils formed, under the honorary presidency of the Director, the first Athletic Association that was

organized among the schools of Paris. They have since competed successfully in various games with other associations. The founders of this school merit high honor for their advanced position in regard to physical education. It was a fundamental principle with them that the promotion of health and the strengthening of the powers of the body should be assured at the same time and with the same care as the development of the mind.

Boys are received into the "infantine" or tenth class at the age of six or seven years, and may be prepared for the baccalaureate at seventeen or eighteen. The school is conducted in three sections called the Elementary, Classical, and French Scientific section. No more than twenty-eight can be admitted to any class, in order that the professors may exert a personal influence upon each pupil, and that the teaching may be given with the highest efficiency.

The classes tenth to the sixth are included in the elementary section. The aim of the teaching during this period is to interest the pupils in objects and their relations, rather than in words and grammatical forms, to lead them to see and to observe, by awakening a spirit of attention and scientific curiosity. The teaching is mostly oral, but written exercises also have their appropriate place. On the programme of studies French receives an average of nine and two-fifths hours per week through the five years. Next in importance is the German (or English) which has four hours each week. Latin begins in the fifth year (sixth class) with seven hours a week. Exercises in numbers are given three hours a week, excursions and gymnastics five hours, and from one to two hours each are assigned to history, geography, writing, object lessons, singing and drawing.

After the sixth class the pupil can choose between the other two sections;—the classical, leading to the degree of "*Bachelier ès Lettres*" in six years, or the scientific, leading with a course in Latin and elementary mathematics to the degree of "*Bachelier ès Sciences*" in five years, or without the Latin to a diploma for special secondary teaching.

On the programme for the classical section the French continues five years with an average of four and one-fifth hours per week, Latin has six and two-fifths hours a week during the six years, Greek four hours, German and history two hours each, mathematics two and one-third hours, gymnastics and military exercises and excursions seven hours, and from one to two hours each are assigned to geography, natural science, physical science and drawing.



On the programme for the scientific section there is less Latin and no Greek, but more time is given to French, German and mathematics.

This course of study, particularly in the elementary and classical sections, corresponds very nearly to that of the programme recently prescribed by the government for the *Lycées* and communal colleges. The principal aim in the entire course is a thorough knowledge of French. It is taught by the reading and detailed explanation of authors, by recitations of choice selections with special attention to elocution, by the study of grammar and by compositions.

In the examinations which I witnessed the questions were comprehensive and critical, relating to grammar, logical analysis, etymology, synonyms, history, the style and sentiment of the author. The pupil was required to give a reason for his opinion and state why a line or passage was admired and wherein consisted its beauty or force. The replies often indicated thoroughness in the previous training. The recitations of selections from poetry and prose were given with earnestness and expression.

Special attention is given to the German language. Pupils are taught to read, write and speak it, and that language is chiefly used in giving the instruction in the class-room. The teaching is made particularly practical in the elementary section by means of object-lessons and familiar conversations, while precision is required in the knowledge and use of grammatical forms. In the later course this knowledge is perfected by more critical study, by reading, conversation and composition.

Latin and Greek are taught with the particular aim of reading authors and becoming familiar with the language and style of each. Choice selections are critically analyzed and committed to memory. Grammar is not neglected, but its rules are simplified and carefully learned. Translations with oral and written exercises are also required.

The mathematics, physical and natural sciences hold a very prominent place in this school. The scientific halls, the chemical laboratory, and cabinets of natural history are large, amply furnished with the greatest care, and give abundant opportunity for practical work.

The high value and success of the teaching is well indicated by the fact that, while only about fifty per cent of the candidates for the baccalaureate from all other schools are received at the Sorbonne, the proportion of pupils received from the *Ecole Alsacienne* has reached the remarkable figure of ninety per cent.

The originality and enterprise of this school in promoting reform in education, in methods, discipline, and physical culture, early attracted the attention of the government, and many of its methods and improvements have been adopted in the schools of the state. Its exhibit at the last Exposition was full and admirably arranged, and was awarded one of the highest honors.

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### THE ADVANTAGES OF COLLEGE FRATERNITIES.

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ALVAN F. SANBORN, MARLBORO, MASS.

SOME time since I received a copy of the *Christian Cynosure*, a Chicago paper, whose object is declared to be "to expose, withstand and remove secret societies, free-masonry in particular, and other anti-Christian movements, in order to save the churches of Christ from being depraved, to redeem the administration of justice from perversion and our Republican government from corruption." It carries its war even into the camp of our college Greek-letter fraternities. If the people of the country are as ignorant as the editors of the *Christian Cynosure* of the benefits to be derived from the college fraternities, it is high time some one pointed out at least the most important of them. Young men intending to take a college course should have some idea of this very important element of college life.

To begin with, just a word about this terrible bugbear of secrecy that frightens so many. As a matter of fact, it is the very first condition of fraternity-existence in most of the colleges, that the faculty be allowed free access to the Constitution. The much abused secrecy is simply the secrecy of the home. Or, better, it is the secrecy of the man of business who does not think it best to publish to the world his every move; that is, it is the secret of success, the wise conservatism essential to "good luck." No one needs to be disturbed for an instant by the secrets of the college fraternities.

It is the function of the college curriculum to attend to the student's intellectual development, but there are many things in this line which every college is too poor or too indifferent to do satisfactorily. Perhaps literary and elocutionary training are as apt to be neglected as anything, and these are often scrupulously attended to by the chap-

ters. In the chapter hall the student gets the benefit of a criticism always friendly but at the same time candid and severe. All the fraternities do not hold weekly literary meetings, but all do supplement to a certain extent the college curriculum, and to this fact the faculty are always willing to bear testimony. Yet this least important element varies so much in different fraternities, and even in different chapters of the same fraternity, that general conclusions are liable to error. Still, it is safe to say that the intellectual help is always something.

Far more important than intellectual training is moral training, and it is along this line that we hear imputations most frequently cast upon the secret fraternities, to the effect that they are "temptations to vice," "bumming clubs," and the like. They will almost of necessity be bumming clubs if they exist under the ban of the faculty. Ex-President Andrew D. White of Cornell, a deep student and eminent educator, says, "The fundamental fact upon which all such associations rest is one which you have doubtless heard of before; namely, that 'man is a social being.' Bring together a thousand students, or a hundred, or even a score, and they will begin to arrange themselves in clubs or cliques. Social clubs, literary clubs, athletic clubs will be formed at once, shooting out from and grouping themselves around various centres like crystals about a nucleus. College disciplinarians may lament this; they may regret that all the students will not simply oscillate between their study rooms on the one hand, and the chapel and lecture-room on the other. But human nature is too strong. These associations will be formed—they are inevitable. Now I maintain the American college fraternities are by far the best result of this spirit yet reached,—they reduce the evils arising out of these inevitable associations to a minimum."

This tendency to fall into sets is just as natural, just as healthy and just as necessary to the highest development of the student, as is the inevitable tendency of society in general to fall into families; but this inevitable tendency must in both cases be properly directed. Let the fraternity once be recognized by a college as a legitimate and beneficent institution, and above all give it a permanent home, and the fraternity becomes one of the surest guarantees for the development of a high manhood in that college. There is value in the discipline of responsibility—a double responsibility—to the college, and to its own alumni-brothers whose generosity has perhaps provided it with a house.

Upon this point of the society house we have some peculiarly valuable testimony. Ex-President White says : "Place twenty or thirty students in the ordinary college dormitory, and there will be carelessness, destruction of property, confusion and uproar. Place the same number of men belonging to any fraternity which has a character to maintain, in a chapter-house bearing the emblems of their fraternity, and the point of honor is changed. The house will be well kept and will be quiet. The reason is simple. These young men have been brought into a sense of proprietorship, into a feeling of responsibility for the maintenance of the property and for its reputation." At Amherst College all the eight societies have homes. Prof. Tyler, who has seen their development in the college for half a century says : "These houses are *homes*, for graduates as well as undergraduate members, which they take pride in keeping in order and beauty, just the antipodes of the typical den of the students of olden times ; homes which welcome back the older brothers when they return, exert the cultivating, civilizing and refining influence of a home on the younger brothers ; and not only homes, but schools of learning and art and good manners, good tastes and good influences which reach many individuals who could not be reached in any other way, and help to maintain good order and good government in the college." President Seelye said in one of his recent annual reports to the alumni : "The society houses present in all respects a desirable feature in our college life. They are well managed. The students who occupy them are careful and orderly. No houses in the village are more attractive, and no households conducted with more propriety. The general tone of the College is such that any society which should tolerate disorderly or demoralizing ways would lose not only its good name, but its position and power in the College. So long as the moral sentiment of the College is what it is, the healthy rivalry for college influence will require every society to be on the side of good order. If any member of a society has bad habits, his society, instead of favoring these, is likely to prove one of the strongest agencies in their removal. We find, therefore, that the actual influence of the societies is salutary. Once again Ex-President White lends the weight of his influence to the side of the societies. "The usual chapter organization," he says, "establishes a sort of solidarity between twenty or thirty members. All are to a certain extent responsible for each and each for all. I know that other college officers as well as myself have availed themselves of this relation for



the good of all concerned. More than once, when some member of a fraternity has been careless in conduct or study, I have sent for some senior members of his chapter, discussed the matter confidentially with them, and insisted that the chapter must exercise an influence for good upon the delinquent. And I have frequently seen this expedient successful when others have failed. Senior members of various fraternities have frequently thus devoted themselves to their younger brethren in a way which would do honor to a brother laboring for a brother. As a matter of fact it is within my knowledge that a considerable number of young men have thus been rescued from courses which might have brought them and their families great sorrow.

One of the most beautiful tributes ever paid to any organization was spoken by Rev. Emory J. Haynes in Tremont Temple not many years ago, when he said, "I pay a debt of gratitude to-day. Years ago, I came from Vermont, a mere youth, to a strange city for my college course. I was far from home. I was suddenly exposed to all the evil lures that a city life can throw in the face of young men. I was admitted to the secret honors of a college fraternity. To-day before three thousand of my dear church congregation, I seek to repay those honors by grateful words, stoutly spoken. That brotherhood inspired me; they rebuked me when I did ill; they rejoiced with me when I did well. They did their best to make something out of poor me. Their four walls were a foster-home to me. When I was sick, they watched with me. With Christ-like tenderness they bent over me and saved my life. Therefore, as long as I live and whenever I may meet any of the wearers of that precious token, I will demean myself like a brother. I unhesitatingly assert, and calmly, too, that I owe as much to that fraternity as to the college itself. If my son ever goes to college, I will select for him an institution well armed with secret societies of the right sort, for such colleges are safer than those which without them leave the boy to the streets or unguarded social recreations upon his evenings out. I am sorry for the college that has made the grave mistake of suppressing them."

Enough has been quoted from these men who know, and whose enthusiasm and love lead them to express their knowledge, to set all doubt at rest as regards the influence of the chapter upon the student morale in the societies that "have a reputation to sustain." But anyone who has lived in a chapter-home does not need to appeal to the words of great men. He himself has seen equally beautiful examples

of this "exhorting one another" and "bearing one another's burdens." I shall never forget the intense earnestness with which a poor, weak brother in my own society said: "I tell you what it is, boys, if I ever do amount to anything, I shall owe it all to you." And well he might say so, for we had borne much and labored with him unceasingly, because we loved him as a brother. That man holds to-day a fine position and fills it well. Suppose that now and then a chapter is found that conducts itself disgracefully. The system is not to be condemned on a single case. On that principle all institutions would be driven to the wall. The true reason why the fraternity system does and will prevail, the reason why it has come to stay, is because its foundation is sound and true, whatever abuses may sometimes appear, and that foundation is friendship. Chauncey M. Depew, a very busy man, said not long ago: "Fraternity is needed in these days of selfish isolation. In business, friendship is impossible; in the professions, it is a lost art. It is hardly possible in our civilization for a friendship to be formed after forty years of life has passed. Only in youth are the warm friendships formed that never die. Between the walls of the chapter-house these friendships thrive. There the modest, sensitive mind unfolds beneath its magic influence." Before I left college, I asked an alumnus brother of a few years' standing, if he found pleasant friends in the South, where he was stationed. "No," he said, and there was a deal of sadness in his tone; "no, I have very pleasant acquaintances, but I don't make friends any more." I could not understand it then; I do now, and so does nearly every man who is a wanderer from the walls of his chapter-home.

That is always a home for us, there we always find a welcome. Valuable as are the intellectual and moral training to be received from four years of chapter life, to speak of them seems like holding out financial inducements to candidates for the Christian ministry. The friendship within the chapter-home is the great and abiding blessing. To it the member of the secret fraternity owes a debt which he can never repay.

## HOW TO USE NEWSPAPERS IN SCHOOLS.

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ADA J. TODD, BRIDGEPORT, CONN.

A MAN reads his morning newspaper as regularly at 8.30 A. M. as he takes his beefsteak and coffee at 8.00, and would feel almost as much at a loss without the one as without the other. The kind of paper he reads depends largely on his mental cultivation, and this choice in turn encourages either the production of first class journalistic work or the sensational rubbish which so largely supplies the reading public and causes the better thinking to deplore the "decline of journalism." How would it do to attend to mental cultivation in the line of newspapers while the boys and girls are forming a reading habit, and reform journalism by producing a demand for something better?

"That is right," says the editor of *THE ACADEMY*, "but can you tell us how to do it?"

According to various complainants the drawbacks are, first, lack of time, which is an important consideration where curricula are so crowded as ours now are, second, lack of material, that is, newspapers, third, lack of interest.

Perhaps these can be best removed by submitting a plan for some definite school, say a city high school of 300 pupils, which could be easily modified to suit any High School or Academy. It would necessarily be more changed for a Grammar School, but would not be less important—rather more so; for most of our coming citizens will never see the interior of a high school, sad to say, and yet will largely form the news-reading element.

In this high school two terms of the first year contain English Composition in the course of study. Here the technique of a newspaper is learned—where to find editorials, foreign and domestic news, book reviews, music and art criticisms, stock reports and market quotations, and the meaning of the various technical terms used in each is explained. A student becomes conversant with a newspaper only by practice, therefore a portion of each recitation is used first in explanations, then in requiring different scholars each day to take part in reading the news. This is useful not only in enabling them to find any kind of news with facility, but also to read it at sight intelligently,—the most difficult, most neglected, but most neces-

sary feature of reading. Just here some one will say "but this is not English Composition." Perhaps not; and yet this class, after learning the different news departments, is expected not only to find them, but to make them, that is, to make reports intelligibly and to put news items in the right place. How could they do this, if they never saw a paper? Nine-tenths of these scholars will write English only in letters and newspaper communications. They should be taught how to do this.

As to material, the class-room should be furnished with as many newspapers as possible, but two will answer, the *best* representatives of each political party. More would be better to familiarize scholars with different methods of arrangement, but the same object could be accomplished by changing them once a month. Local papers will sometimes gladly furnish a copy gratuitously.

In this way, when the second year is reached a sufficient knowledge of newspapers and how to read them is obtained, so that it can be used in the composition work of the year in something like the following way. One hour weekly is set apart for public rhetorical exercises. Each room seats fifty pupils, and each scholar must have a written exercise prepared once in three weeks, making seventeen at a time under the charge of the teacher of the room, who receives the work before the hour for reading it and inspects it with regard to its propriety, but does not correct it until after delivery. Of the seventeen, she assigns two to report the art news of the week, including drama and music, two, the books and magazines, two, foreign news, two, domestic news at large, two, local, and the others she asks to give a brief account of the places brought into prominence by the week's news and the history recalled. Usually only one of each committee is called upon; the other must be ready to substantiate, correct or add facts. The thirty pupils who are not in the working section are furnished with pad and pencil, and write criticisms on the reports given, which are handed to the teacher and reviewed with the rest. One is selected for public reading at the next week's exercise. This teaches them how to do good impromptu work, insures their personal attention to the newspapers through the week, and also their better attention at the time to the work done by their classmates. This is the regular work of the class, but it is varied occasionally to preserve it from monotony by keeping birthday celebrations and such other changes as the teacher may desire. Newspapers can be easily



furnished this class, as they do not need them while fresh and can take those used by the first-year class.

In the junior year the use of the newspapers is continued in this way: having formed the habit of reading and collating news, and having studied Rhetoric, scholars are now expected to exercise both destructive and constructive criticism in their weekly work in English composition. Important subjects under public consideration are assigned for discussion, and lively debates often ensue. They are taught to look on all sides of a question, and from all points of view. Scholars with particular tendencies are led to investigate in directions where such tendencies will be corrected. They are asked to put themselves in others' places; for instance, in discussing the great "strike" of the Central Road, the son of a capitalist could be appointed to defend the employés, and the son of a working-man could take the part of the road; and all the others would be expected to study the situation so as to express, and defend if need be, an opinion one way or the other.

It is surprising, in the first use of papers in this way, to find how much geography, history, political economy, civil government, morals, literature, and almost every art and science is involved in a critical reading of our best journals. This kind of rhetorical work figures largely though not exclusively in the two upper classes of our schools, and at its close there are few pupils who cannot form an intelligent opinion, and a *just* one, of the questions of the day. For these classes, the papers and magazines, as many as can be procured, are kept in the library, to which both classes have free access; but they read the news mostly at home and in the public reading-rooms of the city.

Are the objections answered? Time: no more is taken than before the newspaper was introduced. Material: cost need not exceed fifty dollars a year. If this cannot be obtained, get the cast-off papers a few days old that any one will give away. Interest: this depends on the tact and ability of the teacher, and if he has none he will fail here as everywhere else.

## VIRGIL FOR THE OLD BOYS.

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White's Grammar School Texts.—*Virgil's Aeneid*. By John T. White, D.D. Oxon. London: Longmans, Green, and Co. 12 vols. with vocabularies, square 16 mo., various dates after 1877.

*Virgil's Aeneis travestirt*. Von Aloys Blumauer. Mit einer Einleitung über die Parodie und die Parodisten und mit Anmerkungen herausgegeben von Eduard Grisebach. Leipzig: F. A. Brockhaus. 1872. xxvi, 200 pp. 8vo.

University Edition. — *A free and independent translation of the First and Fourth Books of the Aeneid of Virgil*: in hexameter and pentameter, with illustrations by Thomas Worth. Designed for the use of families, schools, and colleges, etc. Winsted Herald Office, Winsted, Conn. 1870. 22 pp. 8vo. 6 pl.

“Let us consider, too, how differently young and old are affected by the words of some classic author, such as Homer or Horace. Passages, which to a boy are but rhetorical commonplaces, neither better nor worse than a hundred others which any clever writer might supply, which he gets by heart and thinks very fine, and imitates, as he thinks, successfully, in his own flowing versification, at length come home to him, when long years have passed, and he has had experience of life, and pierce him, as if he had never before known them, with their sad earnestness and vivid exactness.” (Newman, *Grammar of Assent*, chap. iv. § 2.) Virgil is one of the authors of whom it is sometimes said that a great amount of youthful energy is spent upon him with little evident return. Whether this is true or not, it surely as an argument would lose much of its force if the old school-boy did, now and then, turn to the pages of the classics for relaxation, and with pleasure. There are some that do this; but the proportion is doubtless very small. It was told as a rather noteworthy thing that a certain gentleman, then a candidate for mayor of his city, belonged to a little club that regularly read together from the Greek authors. Those that remembered this circumstance were not surprised when, a little while ago, the politician became college-president. But many an old boy's remembrance of the *Aeneid*, though as he looks back to his school life it may seem surrounded as it were with a golden, amber light, when he recalls the toil—the big lexicon, laboriously thumbed, the continual consultation of notes—he finds that his Latin lesson is much like the insect encompassed in the jewel. It is really of repulsive shape, and the casual recollection of it gives him pleasure now, only because it is so imbedded in what seems to him his golden age of boyhood.

Doubtless the big lexicon and the notes would be as much of a weariness to-day ; but it is very little physical labor to use the little books edited by Dr. White. They are of convenient size to drop into the pocket and take to the park or to the river side ; the heaviest weighs but a few ounces ; as the reader holds it, a special vocabulary is in his hand, and whenever he is in a quandary over a quantity or a meaning a glance at this same vocabulary is likely to show some special reference to the very line under consideration, and thus he finds his notes without a separate searching for them. While there is at least one other English edition of the *Aeneid* that by its twelve little volumes suggests to the student *divide et impera*, this seems to be the only one that has found its way to the book-stalls of the United States.

But even if he may read his Virgil with the least possible physical effort, what shall lead him to renew his acquaintance with his old-time task-master ? With some, the appetite comes with eating ; with others, it may be stimulated by pungent and easily assimilated sauce. A successful travesty of an author may act in the latter manner. It will almost necessarily bring the original more or less vividly to the mind once familiar with it, or perhaps send the reader to searching for what ground the libel has in the real work. Of course, there is the objection that travesty seems to tend to destroy one's reverence for the truly noble that is burlesqued along with that ultra-heroic which rings a bit absurd in our day ; and again that it may degenerate into coarseness. In the case of Virgil, the first objection holds valid before such as the legendary Saint Kadoch who, that the heathen sweet singer might not be debarred forever from the joys of Paradise, remembered him daily in his prayers. If sometimes this German version uses rather coarser material than we prefer, it also remains true that if we are really to be squeamish perhaps we will not read the *Aeneid*. Again, like the overdose that the stomach rejects, if they should attempt to read the travesty continuously, to most readers it would become insufferably stupid long before the end of the nine books ; nor would they grieve because the author did not complete this work before his death, now nearly a hundred years ago. It is a little of such literature, and taken now and then, that is likely to act as a relish with the ordinarily appreciative reader of Virgil.

The Winsted translation, however, is not so long but that, when it first appeared, while some of the younger of the old boys were yet in preparatory school, it was read through at one sitting, and it can have

lost little of its fascinating power in these twenty years. The translator remarks that it may be put into the hands of students "without the least danger of its being used as a pony." Of course it would be of no interest to a school-boy until he had read the four books in the original; but, after that, it is not so certain that a study of it and its pictures might not lead him to find more real life in the Latin than he had found before. But it was doubtless for the old boys that the translation was made, and the author was doubtless in earnest behind his mask when he said in his preface, "And may the perusal of these pages incite in many souls such a desire to renew and extensively cultivate his charming acquaintance, that they shall not be satisfied until they can adopt for themselves the salutation with which Dante addressed the same old Mantuan Bard:

"Glory and light of all the tuneful train!  
May it avail me, that I long with zeal  
Have sought thy volume, and with love immense  
Have conned it o'er."

E. P. K.

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### *BOOKS RECEIVED.*

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*Ancient Rome from the Earliest Times down to 476 A. D.* By Robert F. Pennell. Revised Edition, with Plans and Colored Maps. Boston: Allyn & Bacon. 1890.

The first task to which the compiler of a school history must address himself is that of selecting his material — of determining what events are to be discussed at length, what may be simply touched upon, and what others, perhaps not unimportant, must be passed over in silence. In this task, and it is not an easy one, Prof. Pennell has been remarkably successful. He seems to possess an unerring instinct for the really important and significant, so that guided by him the student follows the true march of history, not diverted, as is so often the case, by a thousand meaningless details and incidents. The result is that we have a story of remarkable unity and continuity, not interrupted by incident or episode, but leaving upon the mind the impression of a connected, symmetrical whole. This statement applies in less degree to the account of the empire; but one may well doubt whether any really systematic and satisfactory history of those days of disintegration is possible. One might object, too, to the chapter on Latin literature as containing a mass of isolated, undigested details; and it is indeed of



little use and hardly to be excused even on the plea that it was included for convenience of reference.

There is no danger that Prof. Pennell's history will be found uninteresting by the most unwilling student. It is on the contrary full of interest. Its charm lies partly in the directness and simplicity of the narrative, of which we have just spoken, partly in the ease and purity of the style, which is adapted to the comprehension of young students, and partly in a certain suggestiveness, which is one of the best features of the book. The author does not seek to exhaust each subject, — to say all that can be said, — to explain it fully. He is content to give the key to the situation in a sentence or two, and leave it to teacher and pupils to follow out and develop this suggestion. An excellent illustration of this most happy method of treatment is found on page 48, in the brief statement of the cause of enmity between Rome and Carthage. That one short paragraph cannot but start a wide-awake pupil on lines of thought which will be far more useful to him than any amount of explanation in the book or from the lips of his teacher.

The separation of historical and legendary matters is good, and, indeed, necessary. A school-history must give both, and a blending of them in one chronological whole is not to be thought of. Equally well conceived is the idea of adding the element of personal interest by inserting in the proper places brief biographies of great Romans.

Exception, however, must be taken to the author's presentation of the facts in several instances. Hamilcar's real motive in turning his attention to Spain after the first Punic War, namely, preparation for a second struggle, is not hinted at, and one feels all along that full justice is hardly done to Hannibal's brilliant and daring genius. One could wish, too, that the lofty statesmanship which characterized most of Gaius Gracchus' legislation had not been passed over so lightly. It is certainly an unjust reflection on Gaius' patriotism as on his intelligence to assert (p. 97) that "he endeavored to admit all the Italians to the privileges of Roman citizenship, as a means of increasing his popularity." And on page 115, among the reforms introduced by Sulla, the increased weight in legislation granted the senate should not be omitted. In the account of the events which culminated in the triumph and then the assassination of Caesar the author is betrayed occasionally into extreme statements which are hardly justifiable in a text-book.

One or two errors have crept in in spite of the careful supervision to which the book has evidently been subjected in passing through the

press. On page 16, eighth line from the top, read Servius Tullius for Tullus Hostilius. On page 29, eighth line from the top, Sextius is to be read for Sextus. It is also doubtless by an oversight that Cicero is made to rise "in the Senate" (p. 131, ninth line from the bottom) instead of in the Forum, to deliver his oration reviewing the events of his consulship. But the proof-reading has been excellent, in spite of these slips, and in fact the mechanical execution is in every respect above criticism. The maps, clear and easily legible, and the exhaustive index add much to the value of the work.

But these are details. As a whole, and indeed in most of its parts, the book is deserving of the highest praise. It shows an even-handed impartiality, sound scholarship, keen perception and remarkable powers of delineation. It is a text-book of very high grade and should meet a warm and wide reception.

WALTER A. EDWARDS.

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*A German Reader for Beginners in School or College.* With Notes and Vocabulary. By Edward S. Joynes, M. A., Professor in South Carolina University. Editor of Joynes-Meissner German Grammar, Classic French Plays, etc. Boston: Published by D. C. Heath & Co. 1890.

The author of this work, like the late Professor Agassiz, is not above being known as a teacher. He even ventures to make a book in which apparently he is thinking more of the teacher and the learner than of the philologists. He is less anxious to exhibit his attainments than to teach the subject. And the result is that he has made a book for which teachers will be thankful. It is not a literary reader, not a book of gems, and it does not claim to be such. It is a nicely adjusted tool for doing a certain kind of work, and it will do the work well. If one doesn't want to do that kind of work one has of course no use for the tool.

Professor Joynes in his preface anticipates and disarms criticism by stating definitely what he proposes to do, and implies at least his reasons for not doing something else. An examination of his work gives assurance that he has succeeded. There is a field for just such a Reader, and teachers are to be congratulated that it is so well occupied.

# THE ACADEMY:

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## *A JOURNAL OF SECONDARY EDUCATION*

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DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND  
ACADEMIC DEPARTMENTS

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### *FRENCH AND GERMAN AS SUBSTITUTES FOR GREEK.\**

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THE subject matter involved in the theme which I have been asked to discuss, may be treated under several different phases, viz.: whether advanced French should be provided in the student's preparation for college as an equivalent for advanced Latin, or advanced Greek, or advanced Mathematics, as the candidate may elect; likewise, whether advanced German should be so provided; as well as whether the secondary schools should not feel called upon to undertake advanced preparation in both French and German, as possible substitutes for any two of the before-named standard requirements. The limits, however, within which I ought to confine this discussion, so far as my own paper is concerned, oblige me to consider but a single phase of the subject as assigned. Moreover, I am not sure that all the phases which I have indicated, could be adequately treated within the bounds of a single discussion; the substitution of one language for another, for instance, would be discussed on very different grounds from those which would be urged in favor of substituting a language-study for a mathematical

\* A discussion of the question "How far is it advisable for High Schools and Academies to undertake the advanced requirements in French and German as a substitute for the advanced requirements in Latin, Greek, and Mathematics, for admission to college?" See page 448.

requirement. For these reasons, therefore, the present paper is concerned with the single substitution of German, or French, instead of Greek — a phase of the question in which I may be expected to have a peculiar interest. And my interest is intensified because I understand, and shall throughout this paper assume, that the substitution to be considered involves, and is meant to involve, such a building up of the requirements in modern languages as to make them possible substitutes for the entire Latin or Greek now required, — so far as equivalents can be agreed upon and adjusted.\*

It is true that the subject in question concerns both high schools and academies alike; yet I must speak for the most part from the point of view of such schools as the academy at Andover alone: (1) because, so far as the academies and high schools can work within and along the same lines, considerations which are applicable to the one apply equally to the other; (2) because, on the other hand, there are some important respects in which the academies and high schools cannot address themselves to problems in education with equal facility and freedom. The high school is in a special and peculiar sense a public institution, and must obey the public's behest; but the academy, standing as it does on its endowment, has chartered rights and independence, and may at times defy popular clamor, if the interests of education seem to call for and warrant such a course. The high school may not forget that it is the public's creature and must expect to be the public's servant; the academy, on the other hand, must never forget that to be the public's inspiration is its high calling, to be its leader is its inalienable birthright.

Without further preliminaries, I will now ask your attention to a few points which I shall urge in support of the negative of the question. For I believe that it is *not at all* advisable for Phillips Academy, for example, to make any arrangements designed to facilitate the preparation of students for college in French or German in place of Greek. With the question of the advisability of making French or

\* The discussion which followed the reading of this paper, has suggested to me the propriety of reminding my readers that the question which I have considered was brought over from a previous meeting of the "New England Association of Colleges and Preparatory Schools;" and that my understanding of the subject is warranted by the paper of Mr. John Tetlow at the third annual meeting, and by the discussion of that paper (see pp. 5, 7, 10, 15, 16, 46, 48, 49 of the official report). My assumption is also justified by the official report of the "Conference on the Requirements in Modern Languages" which was appointed to consider Mr. Tetlow's paper (see "Commission of Colleges, etc.," 1888-1889, pp. 25, 30).



German a substitute for Greek as a condition of admission to college, this discussion has properly nothing whatever to do ; it concerns the liberty of the preparatory schools alone.

I trust that I do not forget that in advocating the opinions which I hold I am speaking to many whose views are quite at variance with mine ; whom I can by no means hope to persuade. Nevertheless, I am led to believe, by the committee who have asked me to prepare this paper, that a discussion of the subject from such a point of view as mine is desired.

Any immediate attempt to provide for the substitution of German for Greek, by including the advanced requirement in German within our academy programs of study, I should consider very unadvisable : —

1. *Because it would be decidedly premature.* This point, fortunately, I am able to establish by what must certainly be considered competent testimony. For in the "Third Annual Report of the Committee of New England Colleges on Admission Examinations," the executive committee say, p. 16, that "The colleges apparently are not yet in entire agreement as to purposes of the requirements [in modern languages]. No clear definition of these purposes has yet been made to the satisfaction of all ; the *proper relation of these requirements to the other requirements* has not yet been definitely established ; and the position of the study of the modern languages and of their literatures in the whole scheme of liberal disciplinary education remains to be determined." The report from which the foregoing is quoted is signed by Pres. Capen of Tufts, Prof. Poland of Brown, and Prof. Newton of Yale ; and I am informed that no progress has been made, with respect to the points therein referred to, since the same was issued in 1889.

If, then, the question, What ought to be the nature and amount of the full and final college requirements in modern languages, is thus unsettled, it is my opinion that preparatory schools are not only not called upon to assume additional responsibility in respect to providing the instruction called for, for the purpose for which it is called, but they may very properly insist on being excused therefrom. In the "Official Report of the Third Annual Meeting" of this Association, Prof. Fay of Tufts College admitted that uniformity in the college requirements in the modern languages is possible. If, then, this is also the general sentiment among the colleges, — and why should it not be, — I do not believe that the College Commission on Admission Examinations will seriously think of crowding the schools further, — at least, until they can make a presentation of their common cause which shall be mutually

satisfactory to themselves. Such a presentation, I need not add, could hardly fail of being acceptable to the preparatory schools also.\*

2. The substitution of modern languages for Latin and Greek need not at present be undertaken by the schools, because it is *not yet called for* in such a way that the schools need feel under the slightest obligation to heed it.

In the report of the dean of Harvard College, which accompanies the president's report for 1888-89, p. 44, it is stated that the number of candidates who omitted Greek at the entrance examination in 1888 was but 13 among 315; in 1889 this number was but 24 among 327. I am sorry that I cannot give also the number for this year, the third year since this option was first offered. That these figures might have their full significance, however, we should also know the reasons which led these 37 young men to make their preparation for college different from that of the 642 others who entered with them: whether they did so for instance from a deliberate preference; or because conscious of positive inaptitude for the study of Latin or Greek; or because early disadvantages had interfered with the study of Greek at the proper age for it, and thus crowded it out of their course of study altogether. Definite information on such points as these, would add much to the interest in and value of the discussion in which we are engaged. It would also prove important, I am sure, could we know how many of the candidates who omitted Greek at their entrance examination, are still on the regular college course, and how many also have finally made up the deficiency in Greek. But in the light of such information as we have, it is quite obvious that there is yet no evidence of a rational preference for a modern language instead of Greek,—such at least as should require the schools to ask themselves, What ought we to do in this matter? Furthermore, the attitude of the colleges is very significant; in particular that of Harvard College, which one might expect to find most disposed to recognize and encourage this recent tendency so called. So far as I can learn, these substitutions are not yet advocated as an advance or improvement on former requirements; but rather as concessions or remissions, for the benefit of those whom mental idiosyncrasies or early disadvantages seem to have disqualified for the highest order of college preparation and university training.

\* I cannot see why it would not be more desirable for the colleges to abandon this idea of substitution, and to insist that all students should meet the elementary requirements in both French and German, as well as the present requirements to be in Latin and Greek. Such a practicable demand would seem both natural and reasonable; and I feel sure that it could easily be made.

This seems to be plainly indicated in the explanatory statement on p. 83 of the Harvard catalogue: "The eight elementary studies are not supposed to be equivalent to one another, and they will not all have the same weight in the examinations. Greek, Latin and Mathematics will continue to have much greater weight than any of the rest." Those of us who believe that there are no real equivalents for Greek, Latin and Mathematics in a liberal course of disciplinary education, will not be at all surprised by this very significant discrimination at Harvard College in favor of these studies. And, therefore, I say that this discussion deals with a question, not between the colleges and preparatory schools, but between the schools and the public. The point under consideration, then, might be baldly presented thus: The colleges prefer able-bodied men, so to speak, as candidates for admission; but having a real sympathy for the halt and maimed, they will make special provision for such as these. The preparatory schools are therefore led to ask themselves whether they shall continue to confine their work to developing their pupils into able-bodied candidates alone, or shall undertake to transform certain candidates who might also be thus developed, into well-furnished cripples; merely because these persons think they would prefer to hobble into college, under the exceptional privileges offered to the unfortunate. I know that I am now thinking of the extreme possibilities which may occur under the proposed changes which we are considering. Yet I am criticising these changes in the severe terms which I have just used, because such extreme possibilities, as they may be called, are indeed *possibilities*; and they are possibilities, too, which must be clearly foreseen by the advocates of these changes themselves, yet are deliberately entertained and provided for in the measures which they propose.

So far as the experience of a single school may be worth reporting, it is proper for me to say here, that neither the number nor the success of those who have come to Andover to fit for college without Greek has been such as to arouse either our enthusiasm or our sympathy. Of the dozen or so who have thus begun at Phillips Academy their preparation for college, all but one have either abandoned a college education altogether; or have come to feel that there was an awful hiatus in their course, and have sooner or later insisted on retracing their steps and making up their Greek. And if it thus appears that for every boy to whom a college course becomes a possibility by reason of the opportunity to make an acceptable substitute for Greek, there is another boy who loses a liberal education because he has been encour-



aged into what he afterwards comes to consider a fatal error, then I say that the preparatory schools will assume a very solemn responsibility, should they undertake so to build up the advanced courses in French and German as to make the omission of Greek an inviting possibility.

However, there are reasons why the number of candidates for college preparation who might insist on omitting Greek, must continue to be relatively small, too small indeed to be provided for in the programs of our larger schools. (1) There is a traditional feeling, never, I believe, more widespread than now, that a good practical acquaintance with both the Latin and Greek languages is quite as indispensable for the truly liberally educated man as a similar acquaintance with French and German is. (2) There is a pretty general conviction among both the candidates for college and their friends, that the present requirements in Latin and Greek are not in excess for the ends in view. I am here reminded of a very interesting case: it is that of a boy who came to the Academy with a strong prejudice against the study of Greek. That his prejudice had absolutely no rational foundation, the sequel showed. As this boy reached the second year, when Greek is begun, he made known his wishes to the Principal; who, after trying vainly to dissuade him from his wish, sent the boy to me. After a little preliminary skirmishing, I told him I did not know but that he was after all right; that if he felt convinced that he had not the ability to learn Greek, perhaps it was better not to begin. The suggestion that he might not have the ability to learn Greek, was courteously but emphatically resented; so that I was encouraged to enunciate my second proposition, that any boy who had the ability and the time to learn a language which would enable him to commune, as it were, with the most gifted people the world has ever known, was, in my opinion, an egregious fool to throw away his opportunity. After eying me for a moment thoughtfully, the boy suddenly said, "Yes, I believe you are right," and asked me to tell him the lesson for the next day.

At the opening of the next year I met this boy as I was crossing the academy grounds on the first day of the term. I said to him, "I suppose that you and I must now part class-room company." "Oh, no," said he, "I realize now too well what the Greek will be worth to me, to wish to drop it yet." And so he continued, in full connection with his class in both Greek and Latin, till failing health, long delicate and uncertain, compelled him to abandon, for the time at least, studies of every kind.

I am reminded of a more recent case also. Two years ago, a boy in



Phillips Academy wished to drop his Greek after about six months' study, and all through sheer faint-heartedness ; for so far as ability was concerned he could rank among the first of his class. The temptation to give up the Greek came to this boy with its overmastering power, largely because he knew that the degree of Bachelor of Arts was not surrendered thereby. Within the past month, this boy has expressed to me his keen satisfaction that the choicest courses of study at Harvard College are now all open to him, because the Faculty of the Academy vetoed his request of two years ago, though it was then supported by his father's written endorsement and concurrence.

Now, I believe that we have here typical cases. I believe that scarcely a boy who fully understands what it would mean to him, would deliberately mutilate a course of liberal studies by omitting the study of Greek. I also firmly believe that no man who has learned to read Homer, for example, with anything like the facility and appreciation with which he would read a French or German masterpiece, has ever regretted the years spent in making the attainment ; no, not even though circumstances may have so interfered with his beginning Greek in due time as to have delayed for a year or more his admission to and graduation from college. Therefore, I believe that every preparatory school whose foundation gives it the prerogatives of autonomy and independence, should feel itself pledged to the higher education in its fullest and noblest sense ; should scrupulously abstain from encouraging a kind or grade of college preparation against which even that college which will tolerate the same, makes a very pronounced discrimination, and about which most educators have still very decided misgivings. In the language of President Dwight's inaugural address, "We may well remind ourselves that the disputes about education which have filled the air for the last few years, are not ended yet. And it would be a strange thing in the world's history, if, in this regard, the permanent future does not find its fountain of life in the permanent past."

To avoid being misunderstood, I may be pardoned for repeating here a statement from an earlier part of this paper, that the schools are not antagonizing the colleges in objecting to a serious enlargement of their courses in French or German, and that, too, merely that those who wish it may make them real and optional equivalents for Latin and Greek. With the policy of the colleges in regard to this matter, we have at present nothing whatever to do. It is one thing for a college to treat with forbearance a mature and promising candidate who may

have, perchance, some disability as to his technical preparation; it is quite another thing for a school to undertake deliberately to disable such an one. Let the school rather stand by the statement of the college: Latin, Greek, and Mathematics will continue to have much greater weight than any other studies; so that we are not disposed to try the vain and thankless task of seeking equivalents for them.

Finally, I believe that it would *not indeed be practicable* for our academies as at present organized to undertake the advanced requirements in French and German at all. These requirements already imply two years of study on the part of those who have had the added maturity, and superior advantages, of college students. To exact just as much from the less mature schoolboy in one year's time—all the time that now seems available for him—would be, of course, both unjust and cruel. But the situation would be still worse, if the scheme prepared by the "Conference on Modern Language Requirements" last spring, should be seriously considered. I refer especially to that part of this scheme which proposes to make composition and conversation in French and German essential features of the advanced requirements. As to original composition in French and German, only a word. When we consider with what disheartening results the examinations in English composition have been, and still are, attended, the suggestion that we undertake to teach composition in a foreign language seems almost appalling.

Under present arrangements, it seems necessary that instruction in our academies should be given, not to individuals or small groups, but to large classes, varying from twenty-five to forty-five in number. Each class will represent, not a uniform degree of maturity, intelligence and previous training, but may contain students whose ages vary from fifteen to twenty-two years, and whose competency will vary, like that of an ordinary college class, from what is technically called 50% to 98%. Added to such embarrassments as must lie in these conditions, is the very proper reluctance of parents to send their boys from home sooner than is absolutely necessary; as the result of which the average time of a student's connection with Phillips Academy—having a four years' course of study—is not more than two and one-half years. As there are large accessions to each class every year, much time is lost in assimilating the work of the new students to that which their classes have already done. And lastly, it seems as if everybody conspired to impress these boys with the notion, that they should hurry into college just as soon as they in any wise can. In view of such limitations as

these to embarrass instruction in the academies, I do not hesitate to say, that the proposal to have these schools prepare their pupils for conversation in French or German is so utterly impracticable, that I am tempted to pronounce it absurd. I care not what may have been accomplished by certain teachers, with picked classes, or gifted pupils, or under specially favorable circumstances of time, etc. ; for our academies to attempt this sort of thing, would be an unpardonable waste of energy in an attempt to do the impossible.

I will, therefore, conclude my paper by merely summing up my argument : The strictly classical preparatory schools, as such, may very wisely and properly continue quite indifferent to the so-called advanced requirements in French and German ; because (1) the attempt to meet them would be found to be largely impracticable ; because (2) as sometimes understood they could seriously embarrass the prosecution of the standard requirements ; because (3) they are neither urged nor desired, for the most part, in the interests of that liberal disciplinary education which the academies, at least, were founded and are bound to promote.

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*THE DUTY OF THE PUBLIC TO SECURE AS TEACHERS IN THE SECONDARY SCHOOLS MEN AND WOMEN OF THE HIGHEST GIFTS AND THE BEST EDUCATION.\**

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PRESIDENT E. H. CAPEN, TUFTS COLLEGE.

THE general question under which I am to speak with others is somewhat narrow, but it is none the less important on that account. Indeed, it is scarcely possible to conceive of a more important question in the whole range of education. For the teacher who is to have charge of pupils from the time they leave the grammar school until they enter the college to take up their life-work, must fire their ambitions and lay the foundations of all future success. The highest wisdom, the broadest culture, the most thorough equipment are not too much for such an office. It is gratifying to know that there has been a decided tendency towards the employment of persons of this class in secondary work. But I

\* See page 428

suppose the tendency is due, not so much to the spontaneous recognition on the part of the public that the best results can be attained in this way, as to the fact that there has been a larger proportion of college graduates among both men and women seeking employment in high schools and academies. The supply has been furnished, and school committees and governing boards have naturally chosen for the positions at their disposal from those who were best equipped.

But the movement thus begun, I suppose we should be obliged to say rather unconsciously begun, has already done much to dignify the teacher's work and render it attractive, to make it appear worthy of the best energies of the noblest life. At the same time it has done much to give the public a better understanding of what is to be accomplished through teaching. It has set more distinctly before the common view the nature and scope of the teacher's function. It has quickened and clarified men's judgments as to the whole process of education, so that now they are in a better position than ever before to seek the best instruments. This fact alone will go a long way towards disposing the most intelligent and highly educated young men and women to take up teaching as a calling.

The question before us just now is what can be done to promote a tendency that we all observe? My particular business in this paper is, if possible, to answer the question as to the duty of the public concerning it.

The term public is somewhat vague. But I conclude that for the purpose of this discussion we may take it to mean that vast and mysterious body whose opinion is imperative, the body that somehow, by one agency or another, gets its commands obeyed. There is a variety of agencies in the hands of what we call the educational public. The greater part of our school system is not only the direct creature of legislation, but is in the control of the several municipalities of the commonwealth, where an almost unrestricted suffrage, especially in reference to school matters, prevails. But I cannot forget in this presence that there are many private instruments that play an important part in public education. All of our colleges in New England and many of our academies are, strictly speaking, close corporations. The will of the public can only become imperative in them by indirection. Still they are all closely dependent on popular favor, and hence are ever ready to yield to the influences that the public from time to time brings to bear upon them.

In speaking therefore of the duty of the public to secure for the work of secondary instruction the most intelligent and the best educated



men and women, I should begin by emphasizing the fact that the public should exhibit a higher intelligence in the choice of the means by which teachers are installed in their offices. I mean school superintendents, school committees, and educational boards. There has been a good deal of progress in these respects during the last twenty years. The "school-committee-man," that was a familiar figure to many of us in our youth on "examination days" and days of occasional visit, has now almost completely vanished. In larger towns and cities, as a rule, the members of the school committee are chosen from persons of wide experience, who have an intelligent interest in education. They are persons of keen observation and discriminating mind, who "know a good thing when they see it." There has likewise been a great gain in superintendence. The towns that can afford it are employing the best men that money will command for this service. The appreciation of good superintendence is increasing. The legislature of Massachusetts has made provision for the combining of towns in those sections of the state where single towns are unable to maintain a superintendent alone, and under the stimulus afforded by the agents of the Board of Education, many towns are availing themselves of this legislation. We can then with truth affirm that there has been a gain all along the line in the choice of instruments; and to this gain no doubt is due the fact that the number of highly educated persons in the ranks of secondary instruction has increased. Still, there is room for improvement, and so long as improvement is possible, duty is not completely discharged. Until the whole public shall see the importance of putting the schools, public and private as well, into the hands, for direction and management, of persons in all respects competent, there will still remain something more to do.

This end can hardly be reached until the public itself shall come to perceive that as a rule the best teachers, not only in the secondary schools, but in all schools, are those who have had the most finished education. Then they will cease to employ teachers who are only just far enough in advance of their pupils to teach the lesson they are required to teach in the immediate present. The chronic evil is that in so many instances, in schools of every grade, the pupils tread upon the teachers' heels and even overtake and pass them on the road. The teacher has no large outlook, no breadth of views, and cannot meet the demand for higher knowledge and profounder training. Here is where so many who might have gone forward have failed. This is the rock over which so many ambitious youths have fallen and gone to

sleep. Nor can we expect it to be otherwise, so long as the public sense of the greatness of the teacher's office, and of the multifarious qualities of mind and spirit by which the demands of the office can alone be met, are completely or even partially benumbed. What is needed is that the public shall be aroused and enlightened. Put the public in possession of the fact, give it a sure and unerring intelligence in regard to this matter, and the whole problem is solved. This was the business that Horace Mann set out to do in Massachusetts fifty years ago, and while much has been accomplished, there is yet a good deal of work remaining.

How shall it be done? The public mind uses the inductive method. It builds ever on facts. It may speculate, to be sure, but its speculation is intended only to justify present methods. Show it better methods, and it will embrace them. Give it an example of something higher and nobler than it has before witnessed and it will not be slow to follow it. Demonstration sways its judgment every time. This is especially true in education. Left to itself, it is doubtful if it would ever make any progress. It is content to follow the ancient way. It does over again, year after year, century after century, just what it has done before. Only when some leading thought has touched it, only when some commanding process has been put before it, does it use a higher level or step into the open highway of progress. It follows therefore that the way to make the public desire "men and women of learning and teaching power," is to put such persons into its service and let it see what they can do.

Just here, however, we encounter a difficulty. For suppose it should turn out that such persons, when they have been invested with the office, are unable to "make full proof of their ministry." You may say, "this is impossible, for are not intelligence and training the essential prerequisites of ability to teach?" Yes, but what kind of training? A man of large mind and great learning may have the aptitude of a physician, and yet, if he is without specific preparation, he is not one whom you would like to trust in a time of critical illness by the bedside of one whose life is most precious to you. Neither the special faculty, nor wide general instruction, nor both combined, can suffice to secure success in any calling. Accordingly we find that college-bred men and women of acute and discriminating mind are not uniformly successful in teaching. Many of them fail in a work to which they have been prompted by many native impulses. It is the common complaint—a complaint, too, that has been proved to be

well founded by expert observation — that the poorest teaching that is done in any of the grades of schools, below the colleges, is done in the high schools and academies.

This is not, however, because those who exercise their function here are without natural qualifications. The reason for the contrast between them and those who teach in the lower grades is that the latter derive their inspiration and methods from the normal schools. Even those who have not been specifically trained in them have come to feel their controlling and guiding power. Fifty years of normal schools in Massachusetts has changed the tone and improved the quality of all the primary and grammar teaching of New England. The obvious inference from this state of things is, that the same provisions should be made to give specific training to the teachers of secondary grades that has been made for those in the ranks beneath them. This is the only way to give to the teacher's calling either the dignity or the assurance of success that will render it attractive to the best minds. So long as the teacher's office seems to require less in the way of preparation, it can never stand on a par with the other learned professions, and so long as men and women can have no reliable means of forecasting their probable success in a given line of effort, they will only enter upon it with hesitation and fear. They will not be likely to feel a "necessity laid upon" them to teach until they have the means of proving that their lives will be more useful here than elsewhere.

The duty to finish this kind of training is incumbent upon the public. I do not think this question is open to argument. The acceptance of the duty by the public in the existing normal schools closes the question. The necessity for the proper preparation of the one class of teachers is as great as for the other classes. There are those who think, by reason of the order of minds on whom their influence is exercised and the critical period in the life of pupils when they come to them for instruction, it is even greater. At all events, the public has the strongest interest in having this grade of teaching of the best quality. Without spending further time in the discussion of this point I proceed to consider, as briefly as possible, how this result may be brought about. Granting, that is, the responsibilities of the public to provide professional training for secondary teachers, what is the proper method to be pursued?

Various methods have been proposed. At least four have had their advocates. (1) It is said by some, let the college graduates of both



sexes attend the existing normal schools where provision has been made for advanced instruction. Why create a fresh instrumentality, when there is one already provided? (2) Others say, let each New England college establish a chair of pedagogy and open an option for those who are intending to teach, so that when they receive the degree of Bachelor of Arts, they will be ready for their life-work. (3) Others again advocate the establishment of pedagogical schools in connection with some of the great universities that shall bear the same relation to them as other professional schools. (4) There are those who contend for the creation, at some central point, of a school that shall be devoted exclusively to this class of students. Let it be a state school, they say, like the other normal schools, and let it be of such a character as to command the respect, and kindle the desire of college graduates.

Of the first method, I am compelled to say that it has been in existence for some time and has done almost nothing towards meeting the demand. The doors of the existing normal schools have been wide open for a series of years, but college graduates have shown no disposition to enter there. Nor is it likely that they can be drawn in that direction. The character of the pupils attending them forbids. There is not a normal in New England in which it is not necessary to combine elementary teaching with technical instruction. A very large proportion of the pupils are not even high-school graduates. Is it to be supposed, therefore, that students who have breathed the atmosphere of a college for four years will find in these schools a congenial air? The second and third methods are open to many objections.

In the first place, the colleges and universities are not public institutions, and the establishment of so many chairs would require a special solicitation of funds from their friends for the purpose, unless it should be urged, as I heard it last winter by a distinguished educator, that the state should furnish the funds. I can scarcely think, however, that the gentleman to whom I refer was serious in his suggestion, since it would require, in the eight or nine Massachusetts colleges alone, a capital sum of not less than five hundred thousand dollars to start with. Moreover, it has already been demonstrated by actual trial that a single professor can accomplish almost nothing in teaching practical pedagogy. Besides, it is somewhat apart from the idea that has thus far prevailed in the New England college to give the degree of Bachelor of Arts for technical instruction, though it be only in part. The creation of a great professional school for teachers in connection



with one of the Universities is legitimate. But there are practical difficulties in the way. How can such a school occupy the whole field and meet the full requirement? As has already been said, the persons who need this training are of both sexes, and far the larger proportion are women. Unless the University is prepared to make a radical departure in regard to the conditions of membership, it is difficult to see how it can be looked to for a complete realization of the public need.

It is beyond question, in my own mind, that the best method is the establishment by the state of a normal school analogous to, but of higher grade than, those that already exist. This is the logical way. The state has gone thus far. Let it take another step. It is only a step in the road along which it has been marching successfully for fifty years. Such a plan has many things to commend it. It is simple. It is not cumbersome or complicated. It is hardly more complex in its organization or its curriculum than any other institution that proposes to give normal training. If it is put at a proper centre it will not require a great outlay for buildings. It can never call for more than the necessary rooms for class work. In a city like Boston it will not need large libraries, or laboratories, or museums, because it will have at its disposal, at a comparatively trifling cost, what has already been achieved in those particulars. Its pupils may even almost for the asking, sit at the feet of the greatest and most renowned teachers of the age. Here they will have the opportunity presented to them to study and observe and practice. Here they will be brought into a climate that will be favorable to the development of the teacher's art. Here at every corner of the street there will be something to rouse their ambitions and give them motive power for their chosen work.

Such a school would be comparatively inexpensive. It need not have in the beginning, at least, and it is difficult to see how it can ever require, a large and costly corps of teachers. With one broad-minded, well-trained and efficient head, and a few assistants, to give the needed theoretical instructions, and to help students to observe pedagogical facts and make application of pedagogical principles, it will be ready for its work. Its democratic character will invite men and women to it from every quarter. None will ever be deterred from attending it because it is either too exclusive or too expensive. Once adopted and put in operation, it would work a revolution in a single decade, not only in the quality of secondary teaching, but in the disposition among young men and women of the highest mental endowment and

the ripest culture to choose the teacher's calling as the one that furnishes the largest opportunity for usefulness and happiness.

A school like this would be one towards which all sympathies would flow. It would not be the rival of any other. It would be a perfectly unique institution in whose strength and glory everybody would rejoice. It would put a fresh jewel in the diadem of Massachusetts, rendering her more than ever conspicuous and renowned for her services in the cause of learning. It would afford a means not only for the education of her own youth for her own service, but it would draw to it, as a voluntary contribution, the best and noblest minds that other states have to give, and send them forth again with a new investiture of life and power to make the light and influence of Massachusetts perceived and felt in every part of the continent. It would kindle and focalize whatever there may be now of the pedagogical spirit and purpose in the colleges and universities by setting before them this great calling to which some of their most illustrious sons have devoted their lives, as a thing to be studied as a science and practiced as an art.

There can be no question, it seems to me, that a school like this, so closely interwoven with all the educational institutions of our time, so vital to the public welfare and progress, should be furnished by the state. Nothing could be more in keeping with its history and traditions. It is the logical culmination of those measures of public education that the state has already undertaken. It is in thorough consonance with the doctrine and example of her greatest men. The lives of her noblest teachers sanction it. Whoever climbs the stone steps in front of the State House is compelled to pass under the shadows of the bronze effigy of Horace Mann, put there not as a work of art, I am sure, for I can never look at it without recalling the apt and striking characterization of Wendell Phillips, nor yet as a memorial of a great man, though few greater men than he have walked our streets since the Pilgrim band, fleeing from Holland "that they might keep their names and nation," and "give their children such an education as they themselves had received," pressed with hallowed feet the sacred soil of Massachusetts, but put there rather to remind the people of the commonwealth, especially the legislators and all others under the gilded dome who have any responsibility for learning within her borders, not only that they shall see to it, *not only* that her system of public education shall receive no detriment, but that they shall do all in their power to bring that system to perfection; that they shall move for-

ward constantly in the line of a greater efficiency ; that they shall turn aside neither to the right hand nor the left hand ; that they shall go forward and not backward ; that they shall not rest in any achievement, however exalted, but ever seek some loftier vantage and more commanding outlook, and so make for each generation of the youth of the state the best provision that can be made, by legislative device and administrative skill, to the end that wisdom and knowledge may be the permanent inheritance of the people, handed on from age to age with ever increasing accumulations.

For myself I must declare that, whether as public officer or private citizen, I shall not fail to insist that Massachusetts, at least, shall be true to the logic of her history ; that as respects the instruments of culture she shall ever stand in the front rank of states ; that having done a good thing in part, she shall press forward unfalteringly to its completion. She owes this to the principles and purposes out of which her organic life has sprung ; to the good men who have served her with unswerving fidelity in every period of her growth ; to her position as the pioneer in every measure of public beneficence and as the one leading and dominant influence in all the progressive movements of our western civilization ; to the cause of human enlightenment which she has never hesitated to espouse. So long as she fails not in these particulars, so long as she keeps faith with every agency of progress, with every measure for the exaltation and illumination of human life, she will have without solicitation the cordial service of her noblest sons and daughters.

*WHAT CAN TEACHERS DO TO DRAW MEN AND  
WOMEN OF LEARNING AND TEACHING POWER  
INTO THE SERVICE OF OUR SECONDARY SCHOOLS?*

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BY HORACE M. WILLARD, HOWARD SEMINARY, WEST BRIDGEWATER, MASS.

THIS question by its form implies a number of things :

First : That teachers of learning and of ability to impart are needed : that they are needed in our secondary schools ; i. e. that the number of teachers of learning and ability to impart is not adequate to the demand.

Second : That such men and women are not wanting in the world, but that for some reason they are reluctant to enter the service of the schools for secondary instruction.

\* Third : That these men and women can be drawn into the service of these schools.

Fourth : That something can and should be done by teachers to draw them into our academies and high schools.

A question then, so pregnant with meaning, revealing a need in the field of education and a duty on the part of teachers, as well as of the general public and of the colleges, will naturally appeal with special force to this body.

It is ours then, to ascertain what ought to be done, how it can be done, and then to do.

If, by their combination and organization, the laboring classes have accomplished so much for their own advantage during the past few years, what may not teachers accomplish to promote education by concerted action?

They have the additional incentive to this effort, that whatever advances the interests of the schools promotes, in the same degree, the welfare of the teachers.

Standing before this N. E. Association of Colleges and Preparatory Schools, an association whose list of membership comprises so many names of learned and successful teachers ; in this city, whose schools have a world-wide reputation, one might naturally suppose that this question could require no discussion. But the very prominence and character of this body make its discussions and judgments of great value, and therefore its *ipse dixit* of discussion and resolution will be watched with interest, as indicating the trend of thought at the present day. Hence, it is desirable that this question should be laid before you for solution.

It may not be generally believed, even among educators, that there is any difficulty in securing teachers of learning and power to impart for our secondary schools. But the very fact that the question has been proposed for discussion, indicates that some do believe that there is a need of considering it, and it is to be hoped that it will receive due attention, thought, and discussion.

But just here, let me say with Anthony :

“ I am no orator —

But as you know me all, a plain, blunt man.

For I have neither wit, nor words, nor worth,





themselves place and honor, he sees the teachers who have glided so smoothly into their life work, grinding away in their several mills, "toiling, rejoicing, sorrowing," for whom each morning sees some task begun, but by no means does each evening see its close. He sees them subjected to a machine of supervision, organization, classification. Grading, percentages, uniformity, promotions, tests, examinations, "Vox omnibus una."

But individuality, ideas, independence, originality, study, investigation, seem to be relegated to that long catalogue of the things of the past which Wendell Phillips used to describe in his lecture on the Lost Arts. The sight does not inspire him, and feeling the value of his own individual being, he turns to the door of the professional school and enters resolved to win honor and fame. Another young man, who has struggled for years with poverty to acquire a college education, eager to make for himself a name, is confronted by the same necessity of choice. If he will teach, he may at once be free from the pecuniary embarrassment which has so long ground him. If he goes on with study, poverty still accompanies him. The fiend of poverty is at his elbow and bids him run. "Via, says the fiend. Away, says the fiend." But his conscience and inclination say, "Budge not." "Budge, says the fiend." "Go on with your studies," say conscience and desire. The fiend prevails and, without enthusiasm, often without interest, he takes up the work of teaching. He soon finds that it has been reduced to a sort of mathematical system, and that this system works with a machine-like regularity. There is little chance for the development of one's individuality. A certain number of pupils are assigned to a teacher; so many hours are given him for their preparation; so many studies with just so many pages of each; so many months are allowed in this department, so many in that; "a class goes into the hopper at one end and out at the other." This system is calculated to produce a general average intelligence, higher perhaps than that produced by the old system of teaching individuals, not classes; but the bright boys and girls suffer, since the teacher is compelled "to make one individual smaller that another may be larger."

This repression of the individual reacts upon the teacher, who must, likewise, to a great extent, repress his own personality. The theory of the greatest good to the greatest number has so harnessed him to a system that he becomes a part of it and in a measure loses his own identity.

Again, examinations have been so emphasized, that the real pleasure

of teaching, for the sake of education, is, in a measure, destroyed. This system of examinations may have benefited the lazy majority, but in the words of Max Müller, "the vigor of the really clever ambitious boys has been deadened by it." "Formerly," he says, speaking of student life at Oxford, "formerly, some of my young friends were what is called idle at Oxford, but, during their hours of idleness, which mostly meant discursive reading and thinking, they grew into something, they became different from others. Now, my young friends seem all alike, all equally excellent, but so excellent that you can hardly tell one from the other." "Many years ago," he continues, "we wanted to have examinations for the sake of schools and universities; now we seem to have schools and universities simply and solely for the sake of examinations." This, even if exaggerated, contains much truth. He who ought to be a guide and director to intellectual activity, has in many cases degenerated into a mere crammer, whose business is to cram his pupils with all the facts for which an examiner is likely to call. Examinations were originally designed as an aid to intellectual activity, but have grown to be the masters, tending to crush out all heartiness and spontaneity; compelling the student to resort to a stuffing process and to terrorize his students with the bugbear of examinations. How much better if he could only lead them through green pastures and beside still waters, their minds at ease for gathering and enjoying the flowers and fruits of the way.

Men and women of culture do not like to be cramped in their methods of work, much less to be prostrated before the Juggernaut of examinations. Instead of inspiring their pupils with a genuine love of learning and developing an enthusiastic desire for knowledge, instructors are compelled to hold up before their classes approaching examinations for which they must be prepared. Published examination papers are carefully studied by teachers and pupils, for both know that they are likely to be judged by the amount of information they can pack away in their heads to be called out at a moment's notice. Fortunately more rational methods of examination are beginning to prevail, and isolated facts are not sought after so much as the relations which bind these facts together.

But beside the mechanical routine of a teacher's life and the cramping effect of much of the examination work required by committees superintendents, supervisors, and colleges, there are other causes which have deterred men and women of learning and teaching power from entering upon this work.

The social position of the teacher is somewhat uncertain. The culture required for it is not *per se* such as to admit him to the exclusive circles of our best society ; nor is society wholly at fault for this. The teacher is too apt to confine himself to his class room and study, until he comes to be regarded by the public, as a sort of recluse, rather than as a man of affairs, *en rapport* with the live issues of the day. Other men are producers, building up great fortunes for themselves or others, advancing the wealth and promoting the welfare of the town or city in which they live. The teacher, on the other hand, lives apart from this activity, and is in great danger of treading a daily round of petty duties of such a nature as to hinder his own mental growth, instead of growing to commanding stature by the very breadth of his purpose.

"For wisdom," says Emerson, "you must have some entrance to the heart of humanity. He who is exclusive, excludes himself." Confined, so large a part of the time, to the companionship of those who are younger than he, and who naturally look up to him with a certain awe and respect which authority inspires in the young, his tendency is to become autocratic, opinionated, dogmatic. He makes statements to his pupils which may be wrong, but which no one ventures to call in question. He cracks the same old jokes year after year, to which his pupils may respond with a laugh — but oftentimes the laugh is at the teacher rather than at his joke.

"He does not know men. If he did," as Emerson says, "he could talk even on politics, trade, law, war, religion; for everywhere men are led in the same manner."

He is much alone, and his associations, even, confirm him in his loneliness. Isolation unfits him for society; he is not aware of his own deficiencies; his manners become bad.

Again, there is a strange lack of *esprit de corps* among teachers. Those courtesies which the clergy extend to each other; that delightful social intercourse which they enjoy, even those of widely divergent belief, is greatly lacking among those who teach. The very fact that one is a teacher, ought to give him a certain claim to the courtesy and consideration of his fellows. The men of the schools are not bound together as they should be. There is often a critical or jealous spirit and an ungenerous rivalry. A fellow teacher is not sought out, his acquaintance cultivated and his interest and pleasure as a brother worker regarded. I can account for this only on the principle in Physics that like electricities repel. The Homœopathic motto, "*Similia similibus curantur*" might be adopted in such cases to advantage.



Tenure of office too, or rather uncertainty of such tenure, affects unfavorably the teacher's calling. He is, in the first place, a salaried man. If in a public school, his salary is determined by men who themselves hold office and have ambitions for political preferment. A rigid economy is their wisest policy, and they are often very politic. The teacher's position may depend on favoritism; political cabals may unseat him; the quarrels of committee-men may oust him; the political influence of a rich parent may overthrow one who dares to be independent in politics or religion, who forgets that upon these subjects his mouth must be sealed. If he teach in an Academy, even greater trials may await him. For

"Man, proud man,  
Drest in a little brief authority,  
Most ignorant of what he's most assured,  
Plays such fantastic tricks before high Heaven  
As makes the angels weep."

"With devotion's visage  
And pious action  
He can 'sugar o'er  
The Devil himself' "  
And thus in truth

"Enterprises of great pith and moment  
. . . . . their currents turn awry  
And lose the name of action."

Well might Hamlet say,—

"Who would bear the whips and scorns of time,  
Th' oppressor's wrong, the proud man's contumely,  
The insolence of office and the spurns  
That patient merit of th' unworthy takes  
When he himself might his quietus make "

by quietly resigning his position?

The influence of a single man, if rich, wholly incompetent for the place he fills, or rather holds, may be such that no self-respecting teacher can submit to his arrogant dictation.

In short, the positions in schools, whether public or private, are too much subject to the caprice of individuals. They lack in stability and permanence, hence in dignity. "My brethren, these things ought not so to be." That they are real and not fanciful or overdrawn, any teacher of wide experience must admit. There are many exceptions, but these do not disprove this statement. A few who have attained to eminence may reach the Elysian fields :

"Pauci, quos aequus amavit  
Juppiter, aut ardens evexit ad aethera virtus,  
dis geniti potuere."

"Exinde per amplum  
mittimur Elysium et pauci laeta arva tenemus."

But these few bright and shining examples are in the minority, and teaching has suffered. Mrs. Stowe says: "Men of tact, versatility, talent and piety, will not devote their lives to teaching. They must be ministers and missionaries and all that, and while there is such a thrilling call for action in this way, every man who is merely teaching feels as if he were a Hercules with a distaff, ready to spring to the first trumpet that calls him away." Had we numbered more men like Agassiz, Arnold, or Horace Mann, Mrs. Stowe would not say, "merely teaching."

But these hindrances which make teaching appear unattractive to men of culture are not the only obstacles to their electing it as a life work. A strong objection has been that it does not demand of its followers the high degree of culture which the so-called learned professions demand. A man is not admitted to the bar because he is a college graduate. Neither would he for that reason be allowed to practise medicine. The preacher is trammelled who goes from the college to the pulpit; but the teacher goes at once to the school-room. There is a prevalent notion that anybody can teach school; that the teacher, like the poet, is born, not made, *nascitur non fit*. So far as poets are concerned the theory can do no harm, as the world, by the *nascitur* process, has been well supplied with poets. It is a dangerous and pernicious doctrine in its application to teaching. The call for able leaders to man our secondary schools has been long and loud, and a *fit* process for fitting them for their work is in demand. Why need this work suffer longer by comparison with that of the learned professions? Why may not teachers take their rightful place in the world and exert that influence over society to which they are entitled? Why is not their work superior to that of any other profession? Why may they not be regarded as producers, as factors in the material and intellectual growth of the nation?

Their business is to make men and women out of the crude material which comes into their hands. Not to instruct, merely, but to educate, develop brains and character, in short, to make a man. If man was the noblest work of the Creator, His last and best creation, what higher work can any man do than further the Creator's plan in developing

honest men? "I call a complete and generous education," says Milton, "that which fits a man to perform justly, skilfully, magnanimously, all the offices, both public and private, of peace and war." This work demands a preparation second to none; a type of character such that nothing short of the noblest native endowment, supplemented by the highest possible culture, can satisfy the demand. No smattering of the sciences, languages, and mathematics, no dilettantism in the matter of training, but a varied and exacting course of study. A need has been recognized, a beginning made, which will, I believe, result in the establishment of this new ideal school.

"We may not be able to realize our ideal,  
But woe be to us if we have no ideal to realize."

Right along this line, I believe that we can do something so to elevate the work of teaching that it shall be regarded as one of the learned professions. A beginning, in this country, has been made at Johns Hopkins; Clark University is continuing the same. The work of Professor Payne in the University of Michigan is in the same line. All these movements, and others which might be named, especially the effort among Massachusetts teachers during the past year, have already initiated a movement to which the State must soon give the weight of its approval, a "consummation devoutly to be wished."

The profession has suffered because the many bright and shining lights are not in the ascendancy; more leaders are needed. How can they be secured? Manifestly, by the removal of obstacles, by an effort to "make straight paths."

In 1863, twenty-seven years ago, I read, in this city, before the New England Association of School Superintendents, a paper on the "Culture of Teachers," in which I most earnestly advocated the establishment of a collegiate normal school in Boston for the special professional training of college graduates proposing to teach.

If the Normal School has done so well for the preparation of teachers for the schools of grammar and primary grade, why may we not have a school of education, corresponding in grade to the Andover Theological, the Harvard Divinity and Law School, the College of Physicians and Surgeons in N. Y., and others of similar character and rank, whose object should be to give to minds, trained by a college faculty, advanced special training and technical instruction? The average legislator, politician, or business man does not, perhaps, see the need of this. He wants the practical. No money expended on that which is theoretical.

Principals, drilled in the school of experience, alone know the perplexities constantly awaiting them in training the raw recruits for service. The experience of successful teachers can not be purchased by the new and untried. He must, by the same round of mistakes, climb the ladder which leads to success. No record of the past has he to guide him. Why would it not be equally sensible to allow young and inexperienced doctors to acquire their knowledge by experiment and mistake? Many lives might be lost, but the doctor would gain experience, and, after experimenting on a sufficient number of patients or patient ones, he might become a good practitioner.

Education, as a science, is still in a rudimentary state. The vast amount of thought which has been given to the subject by thinkers and philosophers in many countries is, for the most part, inaccessible to young teachers. Though much of this is purely theoretical, spun from the brain of the philosopher, and not the result of practical knowledge, much is of the greatest value, and would be of inestimable benefit to students of pedagogy.

Our army would be but poorly officered if its officers were to be appointed from the ranks, and promoted solely on account of their knowledge of military affairs derived from the service. West Point furnishes it with trained men, competent to take the lead. Not so in the army of teachers. Each man must begin as a private and spend years of valuable time in slowly feeling his way. But let him begin his work with a consciousness of mastery, derived from his thorough drill in the best things in the science of education, and he will waste no time in experiment.

The *Emile* of Rousseau was the beginning of a new departure in educational theories. German writers have made extensive contributions to the literature of education. English writers like Spencer and Bain have likewise contributed to the same. Spencer, for example, has clearly shown the need of suitable food for the brain to work upon — adapted to each stage of its development. Bain has shown it to be the duty of the teacher to stimulate the power of the brain of each pupil to the fullest activity. In the same way many an able writer has given his contribution to the science of education. As a science it is still almost in its infancy and offers a most inviting field for experiment and research.

Some will say that it is sufficient to endow a chair of Pedagogy; not a chair merely, I should say, but another school for a post-graduate course of study, ranking with the others as an integral part of a univer-



sity. This would be better than a normal college, because it could have the benefit of the great libraries and museums of the university, in addition to its own special endowments.

I believe that quite as much time is needed for the preparation of a teacher as for a minister. Eminent scholars and experienced preachers prepare the latter for his work. The critical study of the Old and New Testament in the Hebrew and Greek is necessary; a familiarity with original manuscripts and the voluminous writings of the fathers is required; oriental customs, modes of thought and expression; the growth of Christianity, the battles for the faith, the rise of sects, the doctrines, systems of philosophy, criticism, ethics, history, literature — all this and much more must be carefully studied.

From Socrates, who was the first to arouse the mind to an examination of itself, down to the present time, the work of all writers, of whatever country or language, would be brought into suitable shape for teaching and study. This consolidation of material and resources would lead to definiteness, to a science of education. The number of subjects for study would multiply so rapidly that the wonder would still grow that men had not long ago devoted themselves to this subject. The superiority of this kind of knowledge to that picked up at hap-hazard by varied experience of failure and success would be apparent to all. The teacher would begin conscious of his power and of his ability to impart knowledge.

We should hear less of dull pupils and more of the bright ones. "Much that is written in the minds of one's pupils in indelible ink, will be brought out by the fire of thought."

Wordsworth called his brother a voiceless poet. The world of childhood is full of dumb souls waiting for the voice of the Master and Teacher. We need those who will recognize the gem before it is polished.

Differences of opinion as to methods, order of studies, text-books, would, in a measure, cease. They would be settled *ex cathedra* on a rational basis, — founded on psychological and scientific principles; education would cease to be empirical and would become scientific, having taken its rightful place and speaking with authority.

I have not tried in this paper to lay out any plan for drawing into the service of our secondary schools men and women of learning and teaching power. The general public cannot realize the need of this. We can. Let us by discussion discover the way.

By no means would I be understood to disparage our work. I

regard it as second to none on earth. "The teacher builds the sacred edifice of character which is to be a holy temple for God to dwell in. He raises the stately structure of a life work which shall be as enduring as the laws of God."

He moulds the character of the future citizen. Who of us regrets his choice after the years in which so much of joy has come to him? He sees the manly men and womanly women whom he has helped to train acting well their part in life, and from them receives those words of grateful appreciation which repay him for his toil. Such words are an inspiration and lift him above the pettiness and cheapness which are the bane of ordinary lives. The influence of the earnest teacher, though quiet, may be very far-reaching; and "not until the day of final review will the penetrating stream of his influence be fully revealed."

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OFFICIAL REPORT OF THE FIFTH ANNUAL MEETING OF  
THE NEW ENGLAND ASSOCIATION OF COLLEGES  
AND PREPARATORY SCHOOLS.

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THE fifth annual meeting of the New England Association of Colleges and Preparatory Schools was held at the College of Liberal Arts, Boston University, on Friday and Saturday, Oct. 17 and 18, 1890.

FRIDAY AFTERNOON.

The Association was called to order at 2.45 P. M., by the President, Mr. William C. Collar, of the Roxbury Latin School, Boston. He at once proceeded to the literary exercises of the afternoon. The first subject for discussion was the question, "*How can Men and Women of Learning and Teaching Power be won into the service of the Secondary Schools?*"

Mrs. Alice Freeman Palmer, formerly President of Wellesley College, spoke upon "*The Duty of the Colleges.*" Mrs. Palmer said: \*

I cannot speak for the oldest of our Massachusetts colleges, but will for one of the youngest. From that point of view I discern that many more

\* In this report the remarks of those spoken without written preparation are given in condensed form, though it has seemed best not to report them in the third person. The written papers are given entire in the previous pages.

good teachers are needed. It is plain, too, that the colleges are eager to do their share in remedying the difficulty. How can they do it?

In the first place, our colleges have not given their influence, as they might, to the proper filling of vacancies in the secondary schools. Mercantile interests have been permitted to settle the matter. If college officers and professors would take a warm interest in seeing that college graduates, men and women, enter the vacancies constantly occurring in high schools and academies, much good could be done. And the college officers and professors must take an interest in the schools where are prepared the future graduates of the colleges.

The question before us relates to men and women of learning and teaching power. The colleges can easily test the learning of their graduates; but how shall the colleges know about their teaching ability? And how shall they increase it? How shall they see that avenues are kept open between teachers and places? It is hard to suggest additional duties to hard worked professors. We cannot demand too much of the colleges. They are so poor, so crowded by the growth of their present departments, that we must not expect too much of them respecting the training of teachers, without more endowments. But the colleges possess other capital besides money. Cannot something be done by making a draft upon the unfailing fund of enthusiasm among the presidents and professors?

Fifteen years ago the new high schools of Michigan were being established. The professors at the State University saw the necessity that these should be rightly officered. They themselves were poorly paid, but they entered upon added duties. Students were gathered by Professors Frieze and Olney and taught how to teach; then they went forth to train boys and girls for the university. This shows how something can be done. There are enthusiastic teachers all through the colleges having special interest in pedagogy. Can they not come forward with courses on the science and art of teaching, the history of education, etc.? This has been done at Wellesley with beneficial results, and President Hall, when professor at Harvard, gave such a course. This is feasible without additional funds, but if gifts are forthcoming very much more can be accomplished.

In the second place, let the colleges give themselves. Nothing is of more inspiration than the open doors, the libraries, and the laboratories of the schools as they are. There is nothing to fear. The girls' colleges had to do this. There are many men and women tired of teaching who would gladly give a year to learning in some college. The last twenty-five years have quite changed methods. Let the teachers learn anew from contact with living masters. What I plead for is the active, constant inspiration of life on life.

Again, if means are provided, the colleges can establish the teachers' seminary and department. There can be gathered little groups of men or women busily discussing with their teacher the particular subject of the meeting. The college must grant that the art of teaching is as important as

music, science, and the fine arts. Concerning the provision of means for this I have a suggestion. In this State it is a settled policy that the State shall supply training for its teachers. Is it not as important that this should be done, as that civil engineers should be trained? Professional training is as necessary for the teachers of the secondary schools as for the teachers of drawing. Let the State therefore provide scholarships in the colleges by which teachers may be trained for work in the high schools.

President Elmer H. Capen, of Tufts College, member of the Mass. Board of Education, presented a paper on "*The Duty of the Public.*" \*

Then Mr. Horace M. Willard, of Howard Seminary, West Bridgewater, Mass., read a paper on "*The Duty of the Teachers.*" †

At this point President Collar appointed a Nominating Committee, consisting of President L. Clark Seelye, William F. Bradbury, and Charles B. Goff, to report at the business meeting on the following day, a list of officers for the ensuing year.

The discussion which then arose was spirited and well sustained.

President G. Stanley Hall, of Clark University, was the first speaker.

The question is larger than might at first appear. It touches the universities, the colleges, the secondary schools. It seems that first of all, in order to attract the best men, teachers must have more enthusiasm, more love for their work, more *esprit de corps*. To develop this, there can be nothing equal to specialization. The term narrow specialist is a misnomer. Nowadays, a specialist cannot be narrow. Studies were never so closely linked as now. The chemist needs physics, the biologist finds himself studying psychology, etc. If a man advances to the frontier in any specialty—and there all the work is done—he necessarily gets enthusiasm. The culture that comes from specializing is the only culture worthy of the name.

In this connection it is worth while to note the remarkable educational advance made in France. In the *Lycées*, already they have begun in the line we advocate for American schools. The German *Seminar* might be cited as a good example of proper method for pedagogical study. I would even advocate specialists' going from room to room. One expert specialist could do more in a half-hour recitation than a teacher who teaches half a dozen subjects could do in an hour.

One great difficulty in this country is that no one knows anything of the history of higher pedagogy. Many do not suppose there is any pedagogy except for lower grades. Our books do not touch it. Another difficulty is the ignorance of education in other countries. There is a provincialism among teachers which stands in the way of good work. In France, to-day,

\* See page 407.

† See page 415.



a score of men are devoting themselves to the study of higher pedagogy. The best lesson of German education to-day, is that of the influence of the higher on the lower. We follow the opposite theory and expect the lower to influence the higher.

The plan suggested by President Capen is a good one, but it would be impossible to find the men to carry it out as instructors, and it is a serious question if students would present themselves in sufficient numbers to make it succeed. There is really little demand for the higher study. Such a plan, if carried out, should be a new departure. If it followed old lines it would be simply dignifying the commonplace. And after all, will the demand justify it? Will it not be like the *École Normale* in France, which three times has been compelled to suspend, though it is now at last justifying its foundation.

My own plan would be to select a few young men with some experience in teaching, make sure that they know German, French, and Italian enough to be able to observe, and send them abroad to study, with a carefully prepared itinerary. This last is all-important. Let them learn what has been done in Europe since the Franco-Prussian War—the educational epoch of modern times—and come back to teach secondary teachers and to develop pedagogical departments in our colleges and universities.

Mr. John Tetlow, of the Girls' High and Latin Schools, Boston, said :

I was glad to hear the last speaker say that an expert teacher could do as much with a class in half an hour as an inexperienced teacher in an hour. From that I infer that he would favor any plan by which inexperienced teachers might be brought into helpful contact with expert teachers. There could easily be fitted into President Capen's plan a device for bringing a large number of inexperienced teachers into close relations with experts. As I think of my own past experience, I feel that nothing has influenced my work as a teacher so strongly as the visits I have made to the class-rooms of a few masters of exceptional teaching power. Any scheme for the training of teachers for high-school instruction will fail, which does not include such an element. I should be very glad to see the proposed plan put in operation, for I am confident that its present opponents would speedily recognize its merits. Last winter the high-school teachers of this state attempted to secure in the Legislature, the passage of a measure embodying such a plan as Dr. Capen has outlined. But there was not agreement among those who had a right to an opinion, and the measure failed. Now, perhaps, we ought not to press it. I am glad to see the colleges moving in this matter. Their efforts should be supported, whether President Capen's plan is adopted or not. President Hall expressed some doubt as to the number of students who would enter a normal school of high grade, if such an institution should be established. Last winter I made especial effort to learn how many col-

lege graduates would become students in such a school if it were opened this September. I sent out rather more than a hundred circular letters and received nearly seventy replies. These indicated that seven members of senior classes in New England colleges were quite ready to come, and that a dozen more would probably come. I believe that nearly twenty-five college graduates would be receiving normal instruction to-day, if the proposed institution were in existence. The number of men thoroughly equipped for teaching in such a school may be small; perhaps, as Dr. Hall has said, there is not now even one thoroughly equipped man in the country. But if we fold our hands and do nothing, there never will be. Let us make a beginning, and let the institution grow. Certainly let us not wait till three or four men secure the proper education in Europe. This is not said in a spirit of opposition to any movement already begun. I shall be glad to see the colleges do all they can; but we need something more.

President Charles W. Eliot, of Harvard University, responded to the call of President Collar as follows:

We all have, no doubt, been thrilled by President Capen's eloquent periods, as he described this gem, — "precious gem," I think he called it, — in the diadem of Massachusetts. But what was it of which he spoke in such glowing terms? A school which should have as its corps of teachers one professor and three assistants, and for the support of which some \$7,500, or perhaps for a year \$15,000, was asked. This sum is altogether too small. It should never have been named for the support of a superior normal school. There were to be no buildings, no laboratories, no apparatus. I submit that this is a ridiculously poor equipment. The Harvard Medical School costs over \$50,000 a year, the Law School over \$30,000. A normal school ought to cost as much. I do not believe it expedient to represent that it is wise to establish a cheap superior normal school. An examination of the educational history of Massachusetts will show that, whether as a province or a state, her policy has been to commit her superior education to private endowments. Allusion has been made to the satisfactory condition of primary and grammar-school instruction, as compared with instruction in the secondary schools, and the relative gain has been attributed to the influence of the normal schools. But let us be sure of our facts. I believe, on the contrary, that the instruction in secondary schools is superior to that in the elementary grades. Is there anything in the history of normal schools in Massachusetts to warrant the assignment of the present task to the state? There are several high schools in the cities in which the instruction is now better than it is in the state normal schools. What ground is there for supposing that by the establishment of another state normal school the instruction given in the high schools would be improved? But to return to my first thought, what we ask of the Legislature of Massachusetts for the cause of education ought to be a precious, not a cheap gift. If we want a "gem," let us ask for a real one, and not a glass one.

Mr. John Tetlow :

The last speaker seemed more intent on ridiculing a phrase than on keeping close to the question under discussion. It is not necessary that we should ask for an extravagant sum. President Eliot has ridiculed the application for \$7,500. It seems necessary therefore to state how we intended to expend this money if it should be granted. The \$7,500 asked for was simply to cover the cost of establishing the school, and of maintaining it for the first six months, — from September until mid-winter, — when the Legislature would be applied to for a further appropriation. We hoped to obtain a few rooms — all that would be needed — in a building already under State control, and we thought, as we should have no costly buildings or appliances to provide, that \$15,000 would cover the expenses of the first year. We intended that the salary of the head of the school be \$5,000. This, under existing social and economic conditions, may fairly be called a princely salary for educational work. The teacher who can command such a salary is not a “cheap” man. Then \$3,000 was to be given to an assistant, and five dollars an hour was to be paid to ten or twelve eminent teachers in colleges and secondary schools, each of whom was to devote two hours a week to the work of training the students in the best methods of teaching the leading subjects of study pursued in high schools. No costly laboratories would be needed, for, under suitable arrangements made with local school boards — and we went far enough to convince ourselves that such arrangements were practicable — the laboratories and appliances already existing in the institutions from which the expert teachers were to be drawn, could be utilized.

President Charles W. Eliot :

There are eight principal subjects now taught in the secondary schools. I know of no method of training high-school teachers which shall not give them good models in all these. No one man can possibly do this. The French are right in providing a separate professor in each of these departments and in securing for the purpose the best instructors France can provide, adding, moreover, to the course certain philosophical studies and a view of the contemporaneous state of education in various countries. One man and a few assistants cannot meet this demand. Let us never present this as our conception of a superior normal school.

Mr. John Tetlow :

It is gratifying to hear President Eliot advocate so heartily the views embodied in the plan of last winter. We thought, exactly as he thinks, that the head of the school could not teach everything, and so we proposed that in his teaching the principal should confine himself to such subjects as educational psychology, principles of education and the art of teaching, the philosophy of education, and the history of education, the last including a general survey of the state of contemporaneous education, in Europe. The

eight principal subjects taught in the secondary schools and required for admission to college, were to be covered by the ten or twelve expert teachers to be drawn into the service from the colleges and secondary schools. These, as I have already said, were to be paid at the rate of five dollars an hour, a rate of compensation which would secure the very best talent the state could furnish.

President Collar next made allusion to one excellent suggestion offered by Mrs. Palmer, that courses of lectures on the art of teaching be given by the professors now in the colleges. This was a beginning that could easily be made. He then called upon Superintendent Edwin P. Seaver, of Boston.

Superintendent Edwin P. Seaver :

It was well urged by Mrs. Palmer that a valuable service in this direction could be done by drawing upon the store of enthusiasm contained in the college faculties. It is certainly feasible that seven or eight professors should so arrange their work as to offer lectures upon the methods of instruction in the subjects they themselves teach. This thought has been in my own mind. In fact, the last thing I did before leaving my office was to write a letter to a professor suggesting something like this. My answer has come, by Mrs. Palmer, much sooner than I thought. This indeed would be a good beginning, and one which need not be delayed; but the colleges ought ultimately to go much farther, and I believe they will.

President Collar next invited Hon. John W. Dickinson, Secretary of Mass. Board of Education, to participate in the discussion.

Secretary John W. Dickinson :

It is well known and generally acknowledged, that the Normal Schools of the Commonwealth, since their establishment fifty years ago, have produced a radical reformation in our methods of elementary instruction.

This reformation has extended to all the grades of work in our system of public schools, but not so fully to the scientific work in the secondary schools. The reasons for this are obvious. There has not been in the past any special demand for professionally trained teachers for the secondary schools. The teachers for these institutions have been selected from the graduates of the colleges, with the supposition that as they probably understand the subjects they will be called to teach, they also understand the best methods of presenting these subjects to the minds of their pupils. The improved teaching in the elementary schools has turned the attention of educators to the methods practiced in the secondary schools — and by comparison the former is found to be quite generally superior to the latter. One cause of this difference is found in the fact that the elementary teachers, many of them, have had a professional training in our normal schools. If then we would improve our secondary teaching, it seems necessary that the



secondary teachers should have a professional training also. But before these persons enter upon a professional course of study they must know thoroughly the subjects they will be called to teach—for the legitimate work of the normal schools is to teach the principles, the methods and history of education, and to train for skill in the application of the methods to teaching the various branches required to be taught in the public schools. That is, we must require the candidates for high-school normal training to be scholars in the high-school branches of learning, before they enter a normal school.

But is it said that such scholars will not study in our present normal schools, as they are now organized, on account of the relations they will be required to hold to normal students of inferior scholarship. Without stopping to show that this will not be true, when there shall be a demand for high-school teachers who understand the philosophy of teaching, it may be well to determine what sort of training institution should be provided for them. This may be done by turning attention to the organization of our system of public schools of which our high schools stand at the head. Below the high schools, the system contains the grammar schools, and below the grammar schools, the primary schools. The high-school course of study should be a development of the grammar course, and the grammar course a development of the primary course.

Our school system, then, would be a unit, made up of different grades of schools which would always influence one another from above downward, both in their courses of study and in their methods of teaching. It appears necessary, therefore, on account of the relations that the different grades of the system bear to one another, that the teacher in one grade should be prepared to teach in any other grade. If such training should be given and received, our elementary teachers would teach so as to prepare their young pupils for scientific studies, and the secondary teachers would know how to make a scientific use of the facts which their pupils have already learned.

Our teachers' seminaries should all furnish the same pedagogical training for their classes and the same opportunities for the application of the knowledge acquired to all our grades of instruction, that skill in teaching may be acquired by practice in teaching.

This closed the discussion, and the Association adjourned until evening.

#### FRIDAY EVENING.

At the evening session, President E. Benjamin Andrews, of Brown University, gave to the assembled audience an address upon the question, "Shall the College Course of Study for the Bachelorship in Arts be Reduced?"\*

Upon the close of the address, the members of the Association and

\* This paper will be printed elsewhere.

their guests, numbering somewhat over a hundred, passed to another room, where had been provided refreshments and means for social enjoyment. An hour of conversation and pleasant companionship followed, during which the questions of the afternoon and evening were again more closely and familiarly discussed. The Committee of Arrangements who made provision for this gathering were Professor Thomas B. Lindsay of Boston University, Mr. M. Grant Daniell of the Chauncy Hall School, Boston, and Miss Julia A. Eastman of Dana Hall, Wellesley.

#### SATURDAY MORNING.

The earlier portion of the morning session was devoted to the business of the Association.

The Secretary and Treasurer was granted leave to present his report in the printed proceedings. This report is as follows :

#### RECEIPTS.

Balance, Oct. 12, 1889, . . . . .		\$58 37
Received Assessments of 1888-9, ( $8\frac{1}{3}$ ) . . . . .	\$12 50	
“ “ “ 1889-90, (76) . . . . .	114 00	
“ “ “ 1890-91, (2) . . . . .	3 00	129 50
Total Receipts, . . . . .		\$187 87

#### EXPENDITURES.

Paid Janitor, 1889 and 1890 . . . . .	\$10 00	
“ Caterer “ . . . . .	38 00	
“ for Printing Proceedings . . . . .	40 00	
“ for Postage, and Stationery . . . . .	19 92	
“ for Printing Programmes, etc. . . . .	10 45	
“ for Expressage . . . . .	2 60	
Total Expenditures . . . . .	\$120 97	120 97
Balance, Oct. 18, 1890 . . . . .		\$66 90

#### OUTLOOK.

##### ASSETS.

Balance on hand, . . . . .	\$66 90
Assessments, Due, 1888-9, (3) 4 50	
“ “ 1889-90, (15) 22 50	
Total . . . . .	\$93 90

##### ESTIMATED LIABILITIES.

Caterer's Bill . . . . .	\$38 00
Bill for publishing Proceedings . . . . .	40 00
Postage and Stationery . . . . .	10 00
Total . . . . .	\$88 00

MEMBERSHIP.

Previous to Fifth Annual Meeting, from Colleges	43,	from Schools	48,	total	91.
Elected at	"	"	"	"	11, " " 14, " 25
Present Membership,	"	"	"	"	54, " " 62, " 116.

Mr. John Tetlow, for the Executive Committee, nominated twenty-six persons for election to membership. One of these was found to be ineligible by reason of a recent change of residence to a place outside of New England. The others were elected by ballot. Their names are as follows :

WILLIAM E. HUNTINGTON, Boston (Dean of School of Liberal Arts Boston University), JAMES H. HANSON, Waterville, Me. (Principal of Coburn Classical Institute), JAMES D. WHITMORE, New Haven, Conn. (Principal of Hillhouse High School), LEWIS F. REED, Hartford, Conn. (Principal of Collins Street Classical School), GEORGE M. WAHL, South Braintree (Teacher in Thayer Academy), THOMAS L. ANGELL, Lewiston, Me. (Professor of Modern Languages in Bates College), BENJAMIN GILL, Wilbraham, Mass. (Teacher of Greek, Wesleyan Academy), HIRAM U. KING, Stamford, Conn. (Principal of Collegiate Preparatory School), WILLIAM NORTH RICE, Middletown, Conn. (Professor of Geology in Wesleyan University), GEORGE E. GAY, Malden, Mass. (Principal of High School), CHARLES G. BARTLETT, Lyme, Conn. (Principal of Black Hall School), ALBERT HARKNESS, Providence, R. I. (Professor of Greek in Brown University), D. O. S. LOWELL, Roxbury, Mass. (Master in Roxbury Latin School), C. C. BRAGDON, Auburndale, Mass. (Principal of Lasell Academy), ELLEN A. HAYES, Wellesley, Mass. (Professor of Mathematics in Wellesley College), J. A. O'KEEFE, Lynn, Mass. (Principal of Classical High School), THOMAS H. ECKFELDT, New Bedford, Mass. (Principal of the Friends' Academy), KATHERINE COMAN, Wellesley, Mass. (Professor of History in Wellesley College), ANGIE E. CHAPIN, Wellesley, Mass. (Professor of Greek in Wellesley College), MERRILL E. GATES, Amherst, Mass. (President of Amherst College), CHARLES E. FISH, Exeter, N. H. (Principal of Phillips Exeter Academy), ALBERT L. BLAIR, New London, N. H. (President of Colby Academy), LOUIS POLLENS, Hanover, N. H. (Professor in Dartmouth College), HELEN L. WEBSTER, Wellesley, Mass. (Professor in Wellesley College), MARY A. CURRIER, Wellesley, Mass. (Professor in Wellesley College).

The Nominating Committee, through the Chairman, President L. Clark Seelye, presented a list of officers for the ensuing year. Their report was adopted, and the persons therein named elected, as follows :

President, Timothy Dwight, President of Yale University.

Vice-Presidents, Mr. John Tetlow and President L. Clark Seelye.

Secretary and Treasurer, Mr. Ray Green Huling.

Executive Committee (with the preceding): Dr. Cecil F. P. Bancroft, President Helen A. Shafer, Professor William Carey Poland, Mr. Horace M. Willard, and President Charles W. Eliot.

The same committee was then instructed to report, at a later hour, a list of three names, of which one should be a new name, for the Committee to confer with the Commissioner of Colleges in New England on Admission Examinations.

Mr. Frank A. Hill, Chairman, then presented the report of the Committee to confer with the Commission of Colleges in New England on Admission Examinations, which was as follows:

CAMBRIDGE, Oct. 17, 1890.

The Committee of the New England Association of Colleges and Preparatory Schools to confer with the Commission of Colleges in New England on Admission Examinations beg leave to report that they have had no occasion to present any communication to the Commission in behalf of this Association since the last annual meeting.

The Commission has taken final action on every question thus far submitted to it except that relating to the division of the examination in Greek and Roman history. The recommendation of this division was made in the first communication ever addressed by the Committee to the Commission. It was made at a time when the functions of the Committee were not well defined, and when they conceived it to be one of their duties to note such difficulties in connection with the College admission requirements as seemed to them serious, to formulate them as best they could, and to bring them to the attention of the Commission. There was no formal action on the part of this Association instructing the Committee to make this recommendation. On the other hand, although the recommendation has been repeatedly reported to the Association and spread upon its records, there has been no formal dissent expressed.

The Committee have given reasons in detail for their recommendation. They have assumed from the beginning that an enlightened uniformity is desirable in the history requirements as in the English and modern language requirements. It is the present desire of the Commission, however, to know more fully the attitude of the secondary schools on this subject, and of the Committee to act the pleasure of the Association in any further communications it may make to the Commission with reference to it.

It gives us pleasure to report that the prolonged and painstaking efforts of the Commission to agree upon a scheme of admission requirements in the modern languages have been brought to a successful completion.

The work in detail of the Commission during the past year is lucidly summarized in the following letter from its Secretary:



9 LLOYD STREET, PROVIDENCE, R. I., 14 October, 1890.

TO MESSRS. F. A. HILL, C. F. P. BANCROFT, and G. L. FOX, — *Committee of the New England Association of Colleges and Preparatory Schools to confer with the Commission of Colleges in New England on Admission Examinations.*

*Dear Sirs,* — On the 4th of October, 1889, in anticipation of the fourth annual meeting of your association, I wrote to you, stating what had been done by the Commission of Colleges in New England on Admission Examinations in response to your requests that the Commission should call a conference "on requirements for admission to college between the professors of modern languages in the New England colleges and a certain number of teachers of the preparatory schools;" and, that the Commission should consider your proposition "that the examination in Greek and Roman history be divided." Permit me now to state briefly what further has been done up to the present time.

As stated in my letter mentioned above, a committee, consisting of Professors Fay, Cohn, Wenckebach, Kapp, and Van Daell, was appointed to frame a uniform elementary requirement and a uniform advanced requirement in French and in German for admission to college, and provision was made for further consideration and revision of their scheme. This committee had the matter under consideration for a year, and gave to it their careful attention. Besides discussing it themselves, at the request of the Executive Committee of the Commission, they submitted a scheme of requirements to the criticism of the Modern Language Association of America at its annual meeting in Cambridge last December. Finally, in April of the present year, the scheme, already freshly amended, was discussed at a conference of professors and leading preparatory teachers held in Boston under direction of the Commission and in connection with its fourth annual meeting. Invitations to attend this conference were sent to 245 persons, including the presidents and teachers of modern languages in the fifteen colleges represented in the Commission, the members of the Commission and teachers from preparatory schools all over New England, and to certain teachers in New York, New Jersey, and Pennsylvania who are interested in the work of the Commission or who prepare pupils for New England colleges. The members of your Association were all invited. Seven professors from the colleges and six representatives of preparatory schools participated in the discussion before the conference, and letters of criticism sent by persons unable to be present were read.

After this conference a meeting was held at which one delegate from each college, a teacher of French or of German, or representing those studies in the college, was present. At this meeting the proposed scheme of requirements was subjected to searching criticism, and finally a revised scheme was devised to which these delegates gave their approval. Finally, the Commission received this revised scheme and voted to transmit it to the several

faculties and to commend it to their consideration. The following is a copy of this revised scheme; and it is understood that it is the intention of the instructors in modern languages who framed this scheme to propose to the Commission from time to time changes in the lists of books prescribed.

#### ELEMENTARY GERMAN.

(1.) Proficiency in elementary grammar; implying, especially, familiarity with the following topics: declension of such nouns as are readily classified, of adjectives, and pronouns; conjugation of weak, and of the more usual strong verbs; the more common prepositions; the simpler uses of the modal auxiliaries; the simpler rules of syntax and of word order.

[The specifying of these topics is not proposed as restrictive, but rather to emphasize the importance of a thorough grounding of the pupil in those elements on which later good work is necessarily founded. — Proficiency in grammar may be tested both by direct questioning and through translation of simple English into German.]

(2.) Ability to translate a passage of simple prose at sight — a vocabulary of the less used words being furnished.

[It is believed that the requisite facility can be acquired by reading, concurrently with the work in the grammar, from one hundred to two hundred duodecimo pages of easy German, — chiefly narrative prose, with a few lyric poems.]

(3.) Ability to pronounce German, and to recognize German words and simple phrases when uttered.

[It is recommended that careful attention be given from the beginning to the fluent and intelligent reading of the German works used in the classroom.]

#### ADVANCED GERMAN.

(1.) Proficiency in more advanced grammar. In addition to a thorough knowledge of accident (including the elements of word-formation), and of the principal values of prepositions and conjunctions, the candidate must be familiar with the essentials of German syntax — particularly that of the modal auxiliaries and the subjunctive and infinitive modes.

(2.) Ability to translate ordinary German, to be acquired by the reading, in addition to the elementary requirement, of the following works: *Fluch der Schönheit* (Riehl); *Aus dem Staat Friedrichs des Grossen* (Freytag); *Die Harzreise* (Heine); the first three books of *Dichtung und Wahrheit* (Goethe); *Minna von Barnhelm* (Lessing); *Wilhelm Tell* and *Lied von der Glocke* (Schiller); and thirty pages of lyrics or ballads.

(3.) Ability to write in German a paragraph upon an assigned subject chosen from the works specified in the preceding section.

[While it is assumed that examiners would avoid setting as subjects for composition matters of very subordinate interest or of minor detail, it is hoped that teachers may be led by this requirement to stimulate from the

beginning the pupil's interest in the subject matter of the works read in preparation.]

(4.) Ability to follow a recitation conducted in German and to answer in that language questions asked by the instructor.

[This requirement hardly admits of a test at the examination, but it is none the less to be regarded as of great importance, as inability to meet it would render it impossible, in certain colleges, for the student to take up the work of the class.]

#### ELEMENTARY FRENCH.

(1.) Proficiency in elementary grammar; implying, especially, familiarity with the following topics: inflection of nouns and adjectives for gender and number, excepting unusual cases; the "pronominal adjectives;" the use of pronouns, especially the forms and positions of personal pronouns; the partitive constructions; the inflection of the regular, and the more usual irregular verbs,—such as *dire, faire* and the classes represented by *ouvrir, sentir, venir, paraître, conduire, and craindre*.

[See note under Elementary German, § 1.]

(2.) Ability to translate simple prose at sight.

[It is believed that the requisite facility can be acquired by reading, concurrently with the work in the grammar, from two hundred to four hundred duodecimo pages from at least three dissimilar works.]

(3.) Ability to pronounce French, and to recognize French words and simple phrases when uttered.

[See note under Elementary German, § 3.]

#### ADVANCED FRENCH.

(1.) Proficiency in more advanced grammar. In addition to a knowledge of the accidents, and of the values of prepositions and conjunctions, the candidate must be familiar with the essentials of French syntax—especially the use of modes and tenses—and with the more frequently recurring idiomatic phrases.

(2.) Ability to translate standard French, to be acquired by reading, in addition to the elementary requirement, not less than one thousand duodecimo pages, including *Le siège de Berlin* and *La dernière classe* (Daudet); *Colomba* (Mérimée); *Mlle. de la Seiglière*, the play (Sandeau); *Jeanne d'Arc* (Henri Martin); and one play each of Corneille, Racine, Molière.

(3.) Ability to write in French a paragraph upon an assigned subject chosen from the works specified in the preceding section.

[See note under Advanced German, § 3.]

(4.) Ability to follow a recitation conducted in French and to answer in that language questions asked by the instructor.

[See note under Advanced German, § 4.]

The question of separate examinations in Greek and Roman history has been before the Commission for several years. The Commission has not

seen its way clear to any final action on the question. A committee to whom the Commission referred this question reported last April as follows :—

“That early in February last their chairman addressed a letter to the committee of teachers by whom the question was brought to the notice of the Commission, requesting a fuller statement of the reasons for the proposed separation and of the extent to which the inconvenience complained of was felt among the schools. Your Committee has not yet been furnished with the information sought, nor are they in possession of any evidence that the demand for the separation of the two histories is urgent, or even that it meets with the general approval of the teachers in the preparatory schools.

“They therefore cannot recommend any action on the part of the Commission, but would suggest that the matter be laid over and the Committee continued to receive any further presentation of the case which the teachers interested may see fit to make.”

This recommendation of the Committee was adopted. The Commission is waiting, therefore, to receive the evidence the lack of which is stated in the report just quoted. In the Third Annual Report of the Commission, pages 8 to 10, is printed a statement of what action was taken on this question previous to April, 1890. This statement need not be repeated here, for the report has been sent to all the members of your Association.

On the 8th of October, 1889, I sent you, for such use as you might wish to make of it, the list of required books in English for 1893, prescribed on the 2d of June, 1888, by the conference of professors of English acting in behalf of the Commission. The following is the list for 1894 :

Shakespeare's *Julius Caesar* and *Merchant of Venice*, Scott's *Lady of the Lake*, Arnold's *Sohrab and Rustum*, The *Sir Roger de Coverley Papers* in the *Spectator*, Macaulay's second *Essay on the Earl of Chatham*, Emerson's *American Scholar*, Irving's *Sketch Book*, Scott's *Abbot*, Dickens's *David Copperfield*.

As you will remark, the fifth title is “The *Sir Roger de Coverley Papers* in the *Spectator*,” and not “Addison's *Sir Roger de Coverley Papers*.” The lists for 1892 and 1893 have been revised so that the same title, “The *Sir Roger de Coverley Papers* in the *Spectator*,” will be printed hereafter in these lists. It naturally will not change materially what the schools are likely to offer, but it expresses more accurately and more adequately what the colleges expect.

The Commission is indebted to you, dear sirs, and to your Association for your earnest and helpful co-operation. It holds itself ever ready to give most respectful attention to your expressed wishes.

I remain, as ever, dear sirs, most sincerely yours,

WILLIAM CAREY POLAND,

*Secretary of the Commission of Colleges in New England  
on Admission Examinations.*



In conclusion we repeat that all proposition sthat have been referred by us to the Commission, except the one relating to Greek and Roman history, have received final action. Action on this point is postponed for further information.

The organization that enables the colleges and the secondary schools to confer and act for their mutual interests, though complicated in its outward aspect and formidable in the names of its parts, is proving admirably adapted to its purpose.

The action of the Commission is not binding upon the colleges, but, in the nature of the case, its conclusions go to them with great moral force. Its recommendations, so far as they have received attention from the colleges, have been promptly adopted.

The Secretary of the Commission is entitled to our thanks for his full, prompt, and courteous report of its proceedings.

Respectfully submitted.

FRANK A. HILL,  
CECIL F. P. BANCROFT,  
GEO. L. FOX.

*Committee to confer with the Commission of Colleg  
New England on Admission Examinations.*

This report was accepted and ordered to be placed on file.

President L. Clark Seelye, for the Nominating Committee, reports the following names to constitute the above-mentioned Committee to confer, etc. :—

William C. Collar, for one year ;

Robert P. Keep, for two years ;

William F. Bradbury, for three years.

These gentlemen were unanimously chosen to serve upon this Committee. Mr. Collar asked to be excused, but the Association unanimously declined to accede to his request

A motion was offered by Dr. Van Daell, that the Secretary prepare and publish the proceedings of the first annual meeting, and that the expense be met by an increased assessment for the ensuing year. It was finally voted to refer the matter to the Executive Committee.

The subject of President Andrews' address of the preceding evening was then taken up for discussion, "Shall the College Course of Study for the Bachelorship in Arts be Reduced?"

Professor Tracy Peck, of Yale College, opened the discussion :

I wish to express my hearty approval of the progressively conservative tone and of the conclusions of President Andrews' paper. But the excellence of the paper makes it difficult to glean from a field which has just

been so carefully gone over, and certainly before such an audience one should not forget the sound Roman maxim, *actum ne agas*.

It is important to keep the question at issue distinctly in mind. I presume that no sound educators deprecate the framing of varying courses of study leading to different degrees. The opening of scientific and technological schools has been of very great service to the country, and with commendable hospitality several of our colleges have instituted, alongside of, and, in a measure, articulated with the traditional four-year course, special and abbreviated curricula leading to appropriate certificates or degrees. The vastness of our country and the diversity of its interests, as well as the different circumstances, tastes, and aims of our students, fully justifies this diversity of courses, methods, and degrees. But the Bachelorship of Arts has for several generations represented before the community something different and quite definite. It presupposed, in addition to a somewhat rigid preparatory course of three or four years, the devotion of four years, not primarily to technical or professional work, but to liberal studies. The nature and object of these studies were such that the American college, with all its shortcomings, has striven with reasonable fidelity toward the realization of Milton's grand ideal of education, as "that which should fit one to perform justly, skilfully and magnanimously all the offices, both private and public, of peace and war." And, with a great deal of flippant as well as of intelligent criticism, the calm verdict of the public is, that the work of the college has been well done. Thus the degree of B. A. has acquired by general recognition a quite distinct and historical value, and before its character and significance are seriously modified it ought at least to be shown that there is an intelligent and widespread call therefor. The burden of proof seems to be fairly on the side of those who propose the reduction.

One reason against the proposed reduction of the time of collegiate study is found in the great and rapid increase in the number and range and relations of the objects of knowledge in modern days. Not merely have new sciences come into existence, but the points of view of most subjects of study have been greatly modified and their relations to life and to civilization have been readjusted with severer exactions. The doctrine of evolution, the comparative method of investigation, new views as to the unity of history and the solidarity of the race, have made it far more difficult for the young graduate of to-day than it was for his father to be in touch with the best thought of the time, and to enter at once with intelligence upon his life-work. While our manifold discoveries and inventions have added greatly to the comforts and something to the dignity of life, they have also greatly increased its mystery. An age of intense specialization and of rapid scientific progress must necessarily be an age of great general ignorance. Improved methods of study have done something to facilitate the learner's career, but it can not be said that these improvements have kept pace with

the constantly enlarging area of things which it is desirable to know. Much less has the capacity of the human mind to acquire and assimilate facts and principles grown with the growth of the material on which it may work with profit.

In the complexity of American life and modern civilization, we see another reason for holding fast to the traditional period of undergraduate study. Society with us is far less simple than it was in the early days of the republic. The new problems, and the greater importunity of old problems, which have come to the front since the civil war—as the tariff, the future of the negro, the civil service, the relations of capital and labor, the treatment of the immigrant and of the vicious and unfortunate classes, grave questions of social economy—these and many other profound problems await the attention of the best trained minds, and one must certainly deprecate haste and immaturity in the education of those who must grapple with these problems. Again, our swift and constant communication with the other peoples of the world has started international questions of vast and far-reaching import, for the wise settlement of which no education can be too thorough and protracted.

The exceeding intensity of American life is a further consideration against reducing the period of the student's preparation. Whoever compares American life as it is to-day with what it was even a generation ago, or with life in other countries, realizes how rapidly we are living. We are paying the penalty for our vast area and swift development, our great material enterprises and successes, our manifold inventions, by a certain feverish haste and impatience in nearly all directions. The frequent collapse—physical, mental, and moral—of those who are in this whirl, and who are not yet old men, is no less sad than it should be suggestive to the educator and the patriot. To abbreviate our college courses that our young men may the sooner be identified with this intense life, with a reduced capital of discipline and knowledge, with a less well-developed and matured physique and character, seems to augur only ill. The question of profound importance is not how quickly but how thoroughly and with what wise symmetry we can prepare the youth committed to our charge for the grave responsibilities of life.

We must not overlook the importance of time as an element in sound education. Not that four years should be treated as a fetish; but somewhat as with approximate fitness we all attain our majority at twenty-one years, so there seems wisdom and safety in the period which has usually been consecrated to undergraduate work. With a few this period might perhaps be abbreviated without harm; certainly with many it might be prolonged with advantage. A college course is not an undesirable interruption of a young person's career,—a kind of necessary evil to be compressed as much as possible. There is great value not merely in formal instruction and systematic study, but in the multitudinous molding influences of an academic life. That these influences may produce their best results in permanently inspiring lofty ideals and working principles, in begetting intellectual habits and refined

tastes and the best social standards, it is essential that the student be kept for a considerable time under their sway.

It may be remembered that most probably all of our colleges have materially lengthened their vacations in the last few years. At Yale, for instance, the year of work is about one month shorter than it was thirty years ago. While this shortening of the year can be justified, it constitutes a serious consideration against reducing the number of years.

If there is a widespread call in the thoughtful part of the community for reducing the college course of liberal study to three years, I have not been able to discover it. There certainly are many earnest young persons whom poverty or other circumstances prevents from pursuing a full or even any course of liberal study. Such cases appeal strongly to our sympathies, and most colleges provide for the support of the meritorious; but no reduction in the conditions of time or other requirements can reach them all, and it would be unjust to the majority of students if their privileges were to be diminished because of the unfortunate few. The steadily increasing membership of most of our colleges is evidence of a reasonably well satisfied and enlarged constituency. The Freshman class in the academic department at Yale this year is more than twenty per cent larger than ever before, nor is Yale alone in this rapid growth. Again, the steadily increasing number of graduate students at our higher institutions is testimony on the conservative side of this question. As a rule, such students are from the most serious and successful members of a university community, and that they in greater and greater numbers are continuing after graduation to prosecute liberal studies is a splendid tribute to the charm and the worth of such studies, and is also one of the most hopeful facts in the recent history of higher education in America.

Were it true that thoughtful observers regard the college course for the Bachelorship of Arts as in itself too long, or as unduly deferring entrance upon the responsibilities of life, relief would probably best be found, not in reducing the length of the college curriculum, but in the line of two suggestions to which public expression has recently been given. In the *Atlantic Monthly* for August, Professor Shaler constructed a very forcible argument in favor of allowing the undergraduate to anticipate, in a liberal way, something of his professional and even technical studies. The larger colleges already allow this to some extent in their elective courses. But to make the plan feasible and wisely effective would be beyond the resources in men and equipment of most of our institutions of learning. And so it is at this point that the proposal of Ex-President White in the *North American Review* for October, deserves serious consideration. His proposal, is that our higher schools no longer pretend to maintain like standards for admission and graduation, but that by a judicious and acknowledged differentiation the great majority of our colleges open their doors to somewhat younger and less advanced pupils, while a few insist upon that thoroughness and extent of previous work, and definiteness of purpose, and power and zeal for study and investigation which are essential to the genuine university life.



Dr. Robert P. Keep, of the Free Academy, Norwich, Conn., expressed the opinion that if the colleges abridged their time, the demand will at once be made that less time be allowed the preparatory schools. The higher institution cannot afford to abridge any of its privileges, for if it does, the loss will at once extend to the lower schools.

Dr. Cecil F. P. Bancroft, of Phillips Academy, Andover, spoke as follows :

The interest of teachers and the public in this subject has increased very much since it was first presented to our executive committee, and it is greater at the present moment because a report discussing it is now lying on the table of the overseers of Harvard College. Allusion has been made to the unsuccessful experiment at Brown University, but it must be remembered that the failure there may have been due not to the fact that the end proposed was not good, but to the fact that the method was bad. The public mind was not prepared for it, it was not then the fashion to study abroad, the scientific schools, the elective system, the long professional courses, the graduate instruction, had not been developed. The three-years course at Yale in the infancy and poverty of the college was due not to an educational theory, but to the want of means to maintain a four-years course. The present movement, as I understand it, is not to abridge the period of study, but to redistribute it, and to save, if possible, to a liberal education, an increasing number of young men. The statistics seem to show that young men do not resort to our colleges as much as formerly, a state of things we ought to recognize and if possible to remedy. Under the recent increase and enrichment of graduate courses we may reasonably expect that the more ambitious and competent young men will avail themselves of the opportunity for true university courses, and thus the number of highly educated men will be much increased. The lengthened professional courses, and the graduate departments in professional schools, must not be overlooked. Three years now, with our improved methods and appliances, should count for far more than formerly. The preparatory courses have been greatly enlarged and improved, so that the colleges can do more and better work with young men better prepared. Even the increasing length of vacations is less a loss to scholarship than some would have us think, for a student's mind responds to academic influence out in the world as well as in the bosom of the institution, and his college ideas and inspirations are at work with educating power in vacation almost as fully, in many cases, as in times of residence. There is a logical ground for leaving the age at entrance substantially where it is, inasmuch as our colleges do not desire and do not provide for boys of less maturity than at present, and one object of raising the standard of admission is to secure a greater maturity. Modern college methods assume and demand a preparation in character as well as in scholarship, for all the requirements, opportunities and perils of college

life, and not simply for the examinations and the lectures, and such a preparation requires a definite basis of years and experience. On the other hand there is no logical reason for four years rather than three in the college period. To give over our present senior year to the studies of the professional school, or to make the senior year a pro-professional year, tends to confuse the functions of two separate groups of schools and two distinct stages of education, and to demoralize the last year, which ought to be the most truly "liberal" in all the liberal course. The solution of this problem proposed in an editorial in the *Andover Review*, to give the B. A. degree at the end of a well-considered three-years course of liberal study, and the M. A. degree at the end of a fourth year, has the merit of leaving our present educational machinery undisturbed, and accepts the growing usage of giving the M. A. degree only on the basis of a year's non-professional study in residence. Such a year, if made attractive, and proved to be profitable, will be thronged. Not to invade the time of the next appointment any farther, I would simply add that the objection that a three-years course degrades the B. A. degree overlooks entirely the wide range and hopeless uncertainty of its present value.

On motion of Mr. William F. Bradbury, each speaker upon this question was limited to five minutes.

Dr. Alphonse N. Van Daell, Professor in the Mass. Institute of Technology, said :

I do not propose to touch the main question now open for discussion, but wish to make a few remarks about a point to which President Andrews has given much importance. He has highly praised the general scholar, and attempted to disparage the specialist. The speaker also said that the universities of continental Europe are without comparison the greatest educational institutions in existence. These two propositions seem somewhat contradictory, for the continental universities have become eminent through their great specialists.

English universities have had for object to form general scholars and English gentlemen, a suitable purpose for an aristocratic country. But it has been asserted that but very few of the great men of England come from universities, and that remark seems like a bitter reproach to these institutions. In the United States, where the colleges have been modeled after English patterns, it has also been said that scholars coming from the colleges are not a main factor in the national activity.

The remedy lies in specialization. Specialists are now everywhere the leaders in the various branches of human progress, and must become so more and more. Whenever the student is allowed to choose early in the college course the studies that prepare him directly for the battle of life, he does not lose any discipline, but gains the strength and proficiency which will make him a leader of men.

He was followed by President Merrill E. Gates, of Amherst College

President William F. Warren, of Boston University, said that for the sake of promoting post-graduate studies, he had once been favorably inclined towards those who urged the importance of graduating candidates for the Arts degree at an earlier age than now, but that after fuller experience he had come to the conviction that any shortening either of the preparatory course or of the college course would be detrimental even to the interests of post-graduate study itself. He also called attention to the increasing complexity and all-inclusiveness of American civilization and expressed a strong conviction that the educated minds who are to care for the interests of this civilization in the twentieth century will need to be far stronger and broader, than those to whom will fall the custodianship of civilization in any European country.

Mr. George L. Fox, Rector of the Hopkins Grammar School, New Haven, Conn., spoke as follows :

I always feel some diffidence in speaking at this meeting, when there are so many older and more experienced than myself, yet I wish most heartily to support the words of Dr. Bancroft, that the arrangement is at present not wholly satisfactory, and that it is desirable in some way, without lessening the quality of the work, to lessen the time required before professional studies begin. Most secondary school teachers can testify to a genuine demand for such a change. It comes from a most worthy class of students, men of earnest purpose, but limited means. Either the opportunities of education have been denied them until later than usual in life, or the touch of some influence or experience has awakened them to the value of opportunities which hitherto they have not valued. Such men in the preparatory work often make up two years' work in one. I think that the colleges should be disposed to make it more possible for them to do the same in the academic field. Given the right spirit and purpose, this can often be done. College students have a large amount of leisure time, which the most earnest of them could utilize in this way. I am not in favor of lauding the ideal of what constitutes a college education, nor do I advocate any general shortening of the course to three years. Yet I believe that the system in some way should be made more elastic, so that those who feel the need of starting in their life work as soon as possible, and are ready to put forth extra effort, would be encouraged to finish their course in three years rather than four. I am aware that this is often done at Harvard, but so far as I know, at other colleges, while in rare instances it may be done, there is not the disposition to encourage any such efforts. If such a possibility could be distinctly held out to men having a college course under consideration, some worthy men would be deterred from the unwise step of entering the professional school without college training, as they do now.

Mr. William F. Bradbury, of the Cambridge Latin School, was the next speaker, saying :

I am surprised that Mr. Fox does not know that the very thing he says ought to be, is now allowed in our colleges and preparatory schools. When a boy enters the Cambridge Latin School, he is put where his qualifications require and then can finish the course just as quick as his industry and ability will allow. It is certainly so in Harvard. A few days ago I met a young man who entered Harvard from the Cambridge Latin School in September, 1889, and said to him, "Sophomore now, I suppose." "No," said he, "I am half a Junior." I do not believe that any college would prevent a young man who was qualified anticipating courses of study that belonged to the class above. I see Professor Smith, the Dean of Harvard College, here, and I should like to ask him how many students in Harvard are anticipating studies in the way I have named.

Other remarks were made by President Warren and Messrs. Fox and Bradbury. The discussion was closed by a brief address by Professor Clement L. Smith, of Harvard College, in which he was understood to say in answer to Mr. Bradbury's question, that twelve or more students at Harvard had anticipated studies in the way referred to.

The closing hours of the meeting were filled with an interesting and earnest discussion upon the question, "*How far is it advisable for High schools and academies to undertake the advanced requirements in French and German as a substitute for the advanced requirements in Latin, Greek, and Mathematics, for admission to College?*"

The subject was introduced by a paper by Professor Edward G. Coy, of Phillips Academy, Andover.\*

The discussion was opened by Professor John J. McCook, of Trinity College, Hartford, Conn. His address was as follows :

MR. PRESIDENT, LADIES AND GENTLEMEN : — Called upon to take Prof. Pollens' place, I am glad to find, from the papers placed in my hands, that my views on this question are quite in agreement with his. But on that account one of the elements of an interesting discussion, radical disagreement, will be signally wanting, since we are both in substantial agreement with the essayist.

It is conceivable that a great change in the work of our preparatory schools, such as that brought before us by the question we are discussing might be required, even though no considerable number of persons should demand it. But this is hardly probable, and I shall hope to cover the ground practically by the following questions : —

1. Is the change demanded by public opinion? It is notoriously difficult to poll public opinion, but it seems to me that no such substitution

\* See page 399.



is at present asked by it. Public opinion does seem to be asking for more French and German, because their utility is more obvious than that of Latin and Greek or even the higher Mathematics. And having been interested since last commencement in getting two college graduates "started in life," I have come to have a more feeling sense than ever before of the importance of the argument from utility. The *Brodstudien* are commanding more and more my sympathies. Besides, I do not in the least question that French and German, as they may be taught, and as in a multitude of cases, they are taught, are at least as disciplinary as Latin and Greek, in the way in which in a multitude of cases I fear they have been taught. But if public opinion, in the interest of utility, demands anything in this direction, it is not substitution in the preparatory schools, or indeed anywhere wholly. It is rather that in the college course French and German should have more time, be taught more thoroughly and more practically; and if that should involve the displacement of part of the present Latin, Greek and Mathematics, that the displacement should be consented to. But not substitution whole and entire! And in any event public opinion seems to me to defer to the judgment of college faculties in this matter. "You, gentlemen," so it appears to me to say, "are specialists; you also have had much experience; you are not indifferent to the welfare of our boys; moreover, you are working in many instances upon your own flesh and blood — your own sons upon the same benches with ours. We leave this whole matter to your decision." And this association which witnesses the college professor in intimate conference with the teacher of the schools is a guaranty that this confidence is not misplaced.

So, then, we naturally ask next, Do the colleges demand any such substitution? College-wise, the demand seems to emanate first from professors in the science departments who want their students to know more French and German, not for disciplinary uses nor yet for literary culture, nor even for all purely utilitarian purposes, but chiefly, if not solely, for facility in getting at the contents of scientific treatises in these languages. Then there is the professor of modern language himself. He suffers from the natural wearings of teaching year after year the rudiments. He feels, perhaps unconsciously, that such work is unworthy of his academic position. He wishes to magnify his office. And who shall blame him altogether? Not I, certainly. As a professor of modern language I have felt the pressure of all these motives, and they seem to me by no means worthy of entire condemnation. I think, indeed, that a college professor may so teach the rudiments of French as to make the Latin look more alive, of German as to throw light upon the sister tongue, Greek, and that in many other ways he may elevate this apparently humble work to a position worthy of any man's best powers. Still we are not wholly wrong in asking that our young men may come to us with accurate knowledge of the elements. But from this to the demand for a substitution for Latin or Greek is a very far way indeed. I do not think the demand is made by a majority, or anything like it, of

modern language professors. They may well say, "Give us a chance to bring our young men more in contact with human life, the life of the present;" but consistency at least will withhold them from suggesting that this be done at the sacrifice of contact with human life in the past. The one can be done and the other not left undone.

3. Do young men themselves demand the substitution? Not many of them, I think. And of those who do, the brighter ones would be greatly benefited I am convinced by the drill of the studies they wish to avoid. And if I may judge by my own experience the rest of them will find it not much less difficult to learn German than Greek. If they have not the ability for the one they will probably make a failure of the other.

4. What do the preparatory schools think of the question? Evidence as to this is of the utmost practical importance. Fortunately Prof. Pollens has been at the pains to secure testimony from several academies and high schools. I will read a brief summary of this:

*Kimball Union Academy, Meriden, N. H.* W. H. Cummings, A. M., Principal, does not consider the merits of the question, but thinks his school can meet the requirements, if made.

*St. Johnsbury Academy, St. Johnsbury, Vt.* C. E. Putney, Ph. S., Principal, thinks a three years course would be necessary to carry out the plan; supposes high schools in large cities might do it, but his Academy could not.

With this latter agrees, as you have seen, *Phillips Academy, Andover, Mass.*

*Keene High School; Keene, N. H.* Charles Henry Douglas, A. M., Head Master, thinks the step undesirable, (1) because less disciplinary (2) because it would lead to too early and therefore immature work in branches where French and German are most used. But he thinks his school could do it if required.

*Manchester High School, N. H.* Albert Somes, M. A., thinks the proposed course less disciplinary; believes that his school could not do the advanced work in French and German and still keep up their other work. Moreover, if any modern language is to receive greater attention it should be the mother-tongue.

*The Concord High School, N. H.* John F. Kent, M. A. Principal, does not discuss the question of advisability; states briefly that they could do the work in French but not in German. They give now three years to French and two to German.

*The Dover, N. H. High School,* Frank W. Whitney, M. A., Principal, thinks French and German, taught with composition and conversation, as disciplinary as Greek and Latin. Still he would not wish to drop Latin and Mathematics. For the average high school he regards the substitution impracticable. His school, to his regret, does not teach German.

*Stevens High School, Claremont, N. H.,* M. C. Smart, A. M., Principal, does not favor any change that would add to the work already required of the preparatory schools; would be glad if German, or French, or both, might be

brought into their course of study if this could be done without further overburdening them: thinks that "the colleges, in their praiseworthy desire to elevate the standard of scholarship, are moving so fast that the average High School can not keep up with them."

The evidence collected by Prof. Pollens closes here. How representative his schools may be I can not say. That their testimony may be largely supplemented by teachers present today is greatly to be desired. Of almost more importance than what the Public, or the Colleges, or the school-boy may desire is what the teachers of the preparatory schools think proper and practicable. For my own part I had hoped to listen to testimony from these and to be instructed by it rather to attempt to contribute to the discussion myself. But I may perhaps be allowed to conclude with the expression of the belief that the "Elementary Requirements" in French and German recommended by your committee and adopted with modification by the Commission of New England Colleges is on the whole wise and practicable. As for the scheme for "advanced requirements", while it seems to me in some points exaggerated and on the whole impracticable, it is sure to prove of service as a standard and a starting point and I beg to be allowed to pay my tribute to the zeal and skill of the chairman of the Committee (Prof. Fay) which drafted it.

Professor Charles E. Fay, of Tufts College, was the next speaker :

I do not feel called upon to enter upon any extended defence of the modern languages in reply to the strictures of the essayist. Anyone who looks abroad and notices the composition of the revised schemes of secondary education in those countries of Europe that have always led in educational progress, will justify the advocate of these studies who is content to leave off arguing and patiently await the accelerated movement of the spirit of the time. The argument of Professor McCook that our fitting schools are some of them — perhaps the majority of them — unable to do the work of preparation is far from conclusive. Whether they ought to undertake the work is not to be answered by pleading the limited number of their teachers. When a community deems it expedient to convert its high school into a fitting school for college, in whole or in part, it does not halt because it has no teachers of the classics. It secures them. If fitting schools are not now prepared to do the advanced work in the modern languages, perhaps it may still be their duty to make preparation.

Attention is called to the discrepancy between the opinions of the last speaker and the essayist as to the severity of the existing advanced requirements in modern languages. Referring to the programme recently adopted by the conference of professors representing most of the New England colleges, and afterwards by the Commission on Uniform Entrance Examinations, Professor McCook, who had not participated in that conference, characterized it as so severe "as to be almost grotesque;" while the essayist could not find enough work at hand in programmes of advanced French and Ger-

man to occupy seriously any able-minded student; to him they are programmes for cripples! He has further shown that at Andover, out of eight men who had ventured to substitute a modern language course for Greek, only one had persisted and continued in the school. From this he argues that such men are invariably mental weaklings or would-be idlers. Perhaps that might have been the case, but it is far from being proven. A youth proposing such a change who should be met on the first offense with the insinuation of his lack of capacity, must experience a serious set-back. To be qualified as "a fool" in case of a relapse, might easily dishearten an able and willing student. This opinion of a respected teacher bruited abroad in the school would naturally deter others from undertaking what might after all in individual cases be an equally good and possibly wiser course. No good can come from thus systematically belittling any department of work that is accorded a place among the studies of youth.

As to the alleged absence of demand for advanced work in modern languages: that such a demand exists is proven by the existence, in nearly all our colleges, of three or four-year courses without Greek. How is the existence of such courses to be accounted for? In some colleges, even with the inadequate preparation hitherto accorded, some of the students upon such courses have proved themselves the peers of the classical undergraduates. The movement in Tufts College to make the four years B. Ph. course equivalent in value to the A. B. course, and then to confer the same degree, a movement having its origin in the Faculty, was introduced and urged by the professors of the other departments, in which those students had shown themselves thus competent. It was the department of modern languages, which, regarding the movement as premature, protested against it, and its protest was heard. Now that a fairly good "equivalent,"—if not for the Greek, at least for the work usually done upon Greek in the fitting school,—has received the approval of such competent authority, the modern language department has withdrawn its protest and the plan has been adopted without dissent.

The advocates of the modern languages in New England colleges ask for no lowering of the standard. They believe in the dignity of their work, in its capacity to confer high discipline and to create a love for true scholarship. If any of them urge its recognition as coördinate with Greek in the curriculum, it is not from any lack of respect for the latter, but from a sincere, even if it be mistaken, belief that, by inviting more of our young men and women to the privileges of collegiate study, it will tend to raise the standard of learning and culture in the land.

Mr. James D. Whitmore, of the Hillhouse High School, New Haven, Conn., was the next speaker.

Knowing nothing of college life, except from reading and observation, the views that I entertain of the relative value of Latin, Greek, and Mathematics as compared with German and French, as preparatory studies, come from without the great body of the world's leaders, the liberally educated.



A liberal education, having as its foundation studies Latin, Greek, and Mathematics, has always been highly prized by those who, without educational opportunities, have accomplished something in the world, though at great disadvantage.

These men may have become eminent as statesmen, lawyers, physicians, and merchants, yet they are desirous of giving to their children a liberal education; and we also find them often munificently bestowing their wealth for the enrichment and endowment of institutions for learning. They see and understand, that, while occasionally men with little opportunity for early study attain the highest positions for usefulness, and administer their trusts for the good of society, the ablest of cultured men are superior in all that makes true manhood, to the best of those to whom a liberal education has been denied.

We understand that a knowledge of German and French is necessary to the special student of mathematics, science, and philosophy, but we do not consider them equivalents for Greek and Latin in training the pupil for continuous and difficult thought and work.

We are fitting pupils each year for college, with and without Greek.

We have had pupils in Greek and German commence with us the study of Physics. Our testimony is, that our ablest pupils are those studying Greek.

I have observed, that students who when in college were proficient in Latin and Greek, generally acquire the ability to read easily French and German soon after graduation.

We have found that the ability to read German and French can be most advantageously attained before the pupil commences his Latin, or before he is thirteen years of age.

Were all our pupils in the Grammar schools preparing for college, it would be wise to pursue these studies in those schools in the place of what is called English Grammar. But this I imagine is not feasible in our public schools.

It is in the highest degree encouraging and inspiring to those at the head of public preparatory schools, to listen to the able address of Professor Coy, and the earnest appeal of President Gates to liberally educated men, to stand courageously for that liberal education which has in the history of the world done so much for its leaders.

We need in the management of all public high schools the conserving power and influence of the liberally educated men in the community, who believe in their own education as a power for good in the world, that the privileges which they have enjoyed may be the heritages of those who may come after them.

They must not allow any curtailment of educational opportunities, but holding fast the essentials which they have had, add to them all that comes from the greater knowledge and ability in instruction of the teachers of the present day.

Mr. John Tetlow, of the Girls' High and Latin Schools, Boston, said :

So much has been said up to this point in disparagement of the advanced requirement in the modern languages that I fear the Committee who framed it may begin to feel that they have performed a thankless task. I desire to say, therefore, for the encouragement of the Committee, that I have been greatly pleased with the scope, character, and content of this requirement. One of the schools under my charge has a course of study under which three years may be given to one modern foreign language, and one year to another. It will therefore be entirely practicable for us to meet the advanced requirement in French and the elementary requirement in German, or vice versa.

Mr. Frank L. Farnsworth, of the High School, Brookline, Mass., expressed the opinion that his school could prepare students in advanced French and German, just as it now did in advanced Latin and Greek, if the town would pay for the work.

Mr. James B. Taylor, of the Berkeley School, Boston :

Our ideas of a principle are too much affected by our limited experience. [A worthy lady very much dislikes to hear my youngest daughter called Mollie, because in her childhood she only knew one girl of that name and didn't like her.] The gentleman from Andover does not think much of boys who attempt to enter college without Greek, since those who have tried it at Andover were poor specimens; and naturally so, as he does not deem it necessary for schools to make such attempt 'invitingly possible.' Four years ago, my brightest pupil asked me whether he should take Greek, preferring not to if I approved his choice. Knowing his splendid power in mathematics and physics, I advised the higher course in these studies, and made it "invitingly possible." He entered Harvard with seven honors out of a possible ten, and on the rank list for Freshman year was in section A in four out of five studies. A young lady at the same time entered Smith by advanced French in place of Greek, and afterwards became president of her class. These pupils were by no means "cripples," it is evident. This year a second boy entered Harvard without Greek, and a girl entered Wellesley offering Freshman mathematics for Greek and expecting to graduate at the Institute of Technology after finishing at Wellesley. Where such courses are made 'invitingly possible,' it is my experience that bright pupils rather than cripples will apply. I stand ready to advise any of my pupils who exhibit marked mathematical or scientific power to offer the fruits of such study in place of Greek. I enjoyed Schiller and Goethe in college far more than Homer, and though it is hard to determine the value of any factor of our intellectual life, I think I would be willing to exchange the partial knowledge of Greek which several years of study gave me, for the facility in French and German which I might have gained in the same time. Certainly, I should have understood more of both Greek literature and

thought as well as the resources of my own tongue, if a brilliant master of English had occupied the same time in reading and comparing with the class the different translations of Homer, — Chapman, Pope, Bryant, Parsons, and others, — and made the lines sing with meaning that then only furnished ground for discussion as to the use of the subjunctive or the particular force of a conjunction.

Dr. Alphonse N. Van Daell said :

Let me say another word for the intellectual cripples who have not studied Greek. I have it on good authority, from two Harvard professors, that the boys that graduate from the English High School are generally in good standing, and that some of them stand near the head of their class.

I agree with Professor Coy when he deprecates the idea that all preparatory schools should offer the advanced requirements in French and German. Let every school do what can be done well, let there be a choice for the student so that he may study what he prefers, and do not let the college doors be shut for those who, for one reason or other, object to the old Greek or Latin standard. Let the colleges be open to all who seek high culture ; and in spite of all gratuitous assertions, there is culture in the great literature of France and Germany, a culture much more accessible to many than that of the ancient nations. The degree of usefulness to the student is the measure by which he is made to appreciate the highest and best of civilizations different from his own. For my part, I love Homer and would not part for any consideration with my enjoyment of Greek literature, but there is also a civilizing influence in Molière and Goethe, and in the life of modern nations. It seems to me that it is narrow prejudice to deny a proposition so evident ; and how many can appreciate modern ideas, when they would utterly fail to grasp the value of ancient ideas which have only a more remote connection with our own.

Mr. James A. Tufts, of Phillips Exeter Academy :

The question is not, it seems to me, whether a boy shall omit all Latin or all Greek, but whether, having passed Elementary Latin, Greek, and Mathematics, he must continue those studies or be permitted to substitute Advanced French and German. If a candidate for Harvard omits all Latin or all Greek, it is not enough for him to offer Advanced French and German ; he must have Advanced Mathematics. Now this alternative is so difficult for the average student, that he will prepare himself in Elementary Latin and Greek. Having done so, he may prefer, and it may seem best for him, to undertake the advanced requirements in French and German. Why should he not have the *chance* to do advanced work in French and German as well as in Latin and Greek ? If the High Schools cannot give him this chance, the Academies can ; the Phillips Exeter Academy does. We have advanced courses in French and German as well as in Physics, Chemistry, Mathematics, Latin and Greek. About a dozen of our students

are taking Advanced French ; and as many, Advanced German. There *is*, therefore, a demand for these courses ; and it is a growing demand.

I doubt the advisability of requiring *both* French and German of every candidate for college. It seems to me better to give the option, but to permit him to offer both if he wishes, as is the case at Harvard. I am sure it would be a hardship for our students, as they come to us, to be obliged to learn both French and German. It is easier for a boy to do more in a language already begun than to acquire a new one.

President Collar remarked that during a portion of the discussion of this subject he had been reminded of the reason one old gentleman had been heard to give his son for insisting that the latter should study Greek, — because it enabled a man to look down on other folks.

President Timothy Dwight, of Yale University, spoke as follows :

I am persuaded that both the questions of the morning can be settled by an agreement upon the doctrine presented by me last year\*. Certainly the paper of President Andrews took several positions looking in a similar direction, and Mr. Fox, who was inclined to doubt that the American boy can do so much at eighteen, having recently visited the great public schools of England, comes home to tell us that the American boy can, for the English boy does.

There is no reason why French and German should not be learned before the age of thirteen or fourteen. Much time is wasted owing to the absurd notion that boys must spend the years from ten to seventeen or eighteen in preparing for college. They should have the rudiments of Greek and Latin, French and German before thirteen. Then advanced studies could be pursued to meet the advanced requirements.

Greek should by no means be given up. There never was a man in the world who learned the Greek language who ever regretted it. It is the most beautiful language in the world. Why should we turn it out of our courses of study, when it is the most refining of all languages and of all literatures? Every student ought to have both the ancient and the modern tongues. It is perfectly practicable. Not to every student now. But we should aim at that, and all our discussions should tend in this direction. There is not a boy in Harvard, or in Yale, or any other college, but wastes enough time to accomplish this.

There is the real foundation which underlies every question that has come before us at this meeting. Take that of securing teachers. The boy needs his ablest teachers at the beginning. If he has them, he will start right. It is the noblest place to work. Those of us who have the boy near the end of his student life cannot do half as much. Then as to the shortening of the college course, the men who are prepared to enter at

\* See Education in Boyhood, by President Timothy Dwight, in *The Forum* for April 1890.



seventeen, as they ought to be, have four years in which to pursue college studies before their majority; those who are not ready till eighteen have only three. We must crowd the earlier years. Public opinion is arousing on this point. I do not believe that we are prepared in this country to shorten college courses, or that it is necessary.

One word respecting the average age of graduation and the relative increase in the number of students. It is said that figures cannot lie, but they sometimes do lie when not straightened out by intelligent interpretation. I have a friend, an expert mathematician, who tells me that a great part of mathematics is imagination. Certainly this is the case with some inferences drawn from figures. The college students are increasing more slowly than the population, are they? What of it? Nothing. See what troops of immigrants, to whom college education is out of the question, enter into the account. It is said that students graduate at a later age. I do not believe it. The average age of graduation at Yale is now almost precisely what it was forty years ago, 22.4 years, and seldom varies a fortnight.

To me it is a matter of profoundest gratitude that I graduated before I was twenty-one. Life after graduation is so much richer! Hence let us get the work done at the beginning, so that the students graduate before they are twenty-one. All our effort should be directed to this end.

Mrs. Alice Freeman Palmer said that however it might be elsewhere, in the women's colleges of New England there is a positive, increasing demand for advanced teaching in French and German before girls go to college. It is not merely advisable but necessary in the case of the thousand undergraduates of Smith and Wellesley. We, she added, who fit women for work as teachers feel most deeply the waste of time which has been alluded to in the schools below the secondary schools. If there is no demand for better work there, let us make one.

Mr. James B. Taylor remarked that boys can do what has been suggested at thirteen, but not all boys. There is a marked difference between the boys who inherit six or seven generations of the best blood in New England, and those others who are the sons of parents toiling hard that their children may taste of education utterly denied to them and their fathers.

Dr. Robert P. Keep called attention to the fact that boys who have learned Latin and Greek have a marked advantage over others when they set out to learn French and German.

Professor Truman H. Safford of Williams College said:

At Williams our constituency is very different from that about Boston. The students who come to us are not so ready in French and German. Thus far we have not been able to establish a requirement in either, but we

hope that at some time we can. We shall not, however, relax anything in Latin, Greek, or Mathematics. From experience in educating four sons, I see no difficulty in requiring Latin, Greek, and at least one modern language, except the present state of the schools. It would aid greatly in the settlement of all our questions of this sort, if some one would write a History of American College Courses.

Professor W. C. Poland, of Brown University, mentioned that the last thought expressed had also been frequently in his own mind, and that as he considered who was the best fitted for the work of writing this history, it sometimes seemed to him that Professor Safford himself was the man.

Professor John J. McCook spoke briefly in closing the debate.

The Association thereupon adjourned and the fifth annual meeting came to an end.

RAY GREENE HULING, *Secretary*.

NEW BEDFORD, MASS.

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#### *NEW YORK PRINCIPALS' HOLIDAY CONFERENCE.*

Owing to the burning of the Leland Hotel at Syracuse, the arrangements for the Holiday Conference, December 30 and 31 of this year, have had to be changed. The committee are not yet able to announce what hotel will be the headquarters or in what hall the meetings will be held. The December ACADEMY will contain the full announcements. The meeting will surely be held, and from present indications the attendance will be larger than ever. It is earnestly urged that all principals who can do so will come to the meeting. Topics for discussion are solicited in advance and should be sent either to the president or the chairman of the executive committee.

F. J. CHENEY, *President*.

GEORGE A. BACON, *Chairman of Executive Committee*.

# THE ACADEMY:

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## A JOURNAL OF SECONDARY EDUCATION

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DEVOTED TO THE INTERESTS OF HIGH SCHOOLS ACADEMIES AND  
ACADEMIC DEPARTMENTS

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### II. COMPOSITION TOPICS.

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S. THURBER, BOSTON.

Even if the pupils of secondary schools had to be conceived as destined to literary careers, still there would be no proper place in a secondary course of study for formal essays on themes requiring maturity of mind. When the juvenile writer discusses a juvenile theme, a condition of harmony is established. It is an academic pedantry to solicit adult work from young pens. Any scholastic procedure that tends to glorify the literary profession as a possible future for the youth in high school classes is sadly misdirected. Much rather should the discipline in such classes aim to instil a dislike of the precarious occupation of the professional writer. Everybody should be trained to express his thoughts, if need arises, simply and in good English; and everybody should be trained to wait till his thought is important enough and ripe enough to be worth expression before he seeks or consents to appear in print. Reluctance to write is a good trait in an educated man or woman, as is also the habit of severely critical selection of one's own reading. The school composition paper might well bear, clearly printed across the head of each page, the *golden rule*, as the one most fundamental principle of English composition. Some lingering unwillingness to put pen to paper, at least with a view to invite public attention, is not a wholly bad ingredient in the outfit of a high school graduate.

For one such graduate that will be called upon to produce literary, scientific or historical essays, scores will have to write letters, keep accounts, draw up reports of transactions, or practise some others of the endless variety of business or social forms of writing inevitable in modern life. What high school pupils are going to do hereafter in the way of English composition is not a matter of doubt. Every experienced teacher who has done a little investigating in this direction knows where the most of his recent graduates are. They are in business. Every one of them has some immediate concern with the writing of English. As to the writing of essays, they all bade farewell to that when they tied the last ribbons on their graduation manuscripts.

A picked-up topic will sometimes be better than a far-sought one. A pupil comes to his teacher, e. g., with a plea for some exemption or postponement, arguing his case with fluent speech, showing this or that emergency in his domestic affairs, this or that accident that left him bookless at the eleventh hour, and so on to the end of the familiar tale. Your time is limited; you cannot take in all the bearings of so rapid a pleading. You have no alternative but to do as the courts of last resort do in cases of appeal. You find yourself positively compelled to insist that the case be reduced to writing. You pass over a sheet of composition paper; you announce a time for receiving the document, and another time, a little later, for pronouncing your verdict; you make known, moreover, that good English and studied brevity in the pleading will prepossess you in favor of its argument. Petitioner now feels like withdrawing his petition. But this can absolutely not be done. He is enmeshed in the toils of a composition. You have caught him in the neatest possible manner. The conditions of a good composition were never so perfectly realized. The exercise is now not merely disciplinary, academic and formal, but has in view a genuine purpose, which the writer actually desires to attain. His head is full of his subject. "Invention" is already done; now "composition" follows naturally and easily. The finished production should be read, corrected and utilized for pedagogic purposes, like any other exercise.

It is a good rule that every request for inquiry about lost articles and missing books be presented in writing, couched in the form of a note, with all due regard to the conventional forms of courtesy. Such notes are not the less *compositions* because written with a purpose. We teachers are so full of professional dignity that we can hardly conceive an exercise as good that we do not plan for and have the entire class engage in at once, as the brigadiers plan the sham battles of the



militia, prescribing which regiments shall retire and which press on to victory. And so much are we in bondage to routine, and so little do we like to acknowledge that it is routine that holds dominion over us, that we please ourselves by calling it *justice*, and even imagine that we *wrong* a pupil by giving him a composition to write on an occasion when the rest of the class have none; the theory being that a school task is an infliction which each must see the rest suffer at the same time with himself. But good composition topics must be caught when they come. A topic may come like a windfall. It must be picked up when found, or it will decay and soon become as little interesting and provocative of appetite as specimens preserved in alcohol. And then, if the teacher is a genuine pedagogue, and not a routinist, a composition written by one pupil becomes a lesson to all almost as directly as to the writer.

If it is the custom of the school to keep *time-diaries*, to be presented for inspection as records, for the sake of their content, the English teacher may with complete reasonableness find even in these aggregations of figures excellent composition matter. Here of course there is no "invention," nor is there, in the rhetorical sense, any "*style*." For *style*, however, in the sense in which boys and girls understand it, the opportunity is unbounded. The difference between neatness and slovenliness is nowhere so marked as in these time-diaries. It argues ill for the school work in a large sense, if these diaries are allowed to come in soiled and illegible. It is very easy, apparently, for teachers to act upon the tacitly accepted theory that these diaries, being meant for use, have no relation to beauty, just as, if you hold a man's note for a thousand dollars, you are not concerned about its chirography, but only about the solvency of the maker and his endorsers. But we are now concerned with school matters and the training of youth. How much time a pupil has studied on each branch of his work during a month, is a question having its own importance. How neatly the pupil makes his figures, foots up his aggregates, abbreviates and punctuates his dates, and how smooth and clean he keeps his paper, — this also is a question having its importance. And if you were seeking a copyist, a secretary, a book-keeper, you would shut your eyes to the significance of the figures as time records, and would open them wide to the meaning of these figures as betraying personal and mental habits.

So if your city or town supplies free text-books to your pupils, and you have to take the pupils' receipts for the books issued to them, these receipts are excellent as compositions and may be so treated in every

respect. We should leave to institutions whose students are geniuses and are engaged in original research the neglect of form in these matters of business and utility. A simple list of book-titles makes no bad written exercise. One pupil, — probably a girl, — has a fancy for using a great stub pen, and tries, apparently, to emulate Drake DeKay, of autographic memory; of course she makes a legally valid receipt. But her book-titles are crowded and hardly decipherable. Her work does not commend her. She found her paper nicely ruled, with spaces for the titles; these she has ignored, and has asserted her individuality in a way to make her unpleasantly conspicuous. Is not this an occasion to be utilized for a little pleasant moralizing? The work of pupils when doing even so simple a thing as this perfunctory and book-keeping task is one kind of composition, without the necessity of invention and without the opportunity for verbiage. The examination of such exercises is far less depressing than is the reading of the compositions proper, where invention and verbiage have full play.

Again, if you require each pupil to post on the under-side of his desk cover his weekly programme, you make him put out a sign of his style as a penman and draftsman. Each teacher who inspects the school desks will see a specimen of his work. Unless the pupil be a genius, he should be held to good work even in this humble matter.

A kind of composition that may be kept going all the time, and may easily be kept of living interest, is secured by such a device as the following: Let the pupils of a class take turns in acting as secretary, to note and record the transactions of each lesson. The secretary for the day is not to be called upon to recite. He takes notes of what you say and of whatever comes up in the class of special interest. As the lesson proceeds, it may be well to caution the secretary as to what to include in his notes and what to omit from them. This cautioning is a part of the instruction which you, as teacher of English, are giving not only to the secretary but to all the class as well. The secretary will note all appointments for the next lesson, and thus will serve a useful purpose quite apart from your main one, which is to get some good composition matter. From his notes the secretary will digest a report of the recitation. This he brings into the next meeting of the class and reads from his first draft. Here it serves as introduction to the recitation, and is made the object of comment and amendment. This is an invaluable discipline. To report well is not given to everyone who merely listens and writes. A phonograph would report the whole. But the human secretary must select the salient

points. To detect these salient points requires close attention to all that is said and done, and a power of discrimination between the main topics and incidental, illustrative matter that is of course not easily within the reach of the juvenile mind. But this discriminating faculty can be cultivated. Every day the class hears you request the secretary to shorten his report by striking out the less important matter. You explain why this or that may be omitted, or, if it is inserted, why it should be given in connection with other matter to which it was incidental. So far as the ear can detect ill-made sentences, correction can be applied at once, while the report is in the inchoate state. But time presses, and the lesson must go on. Within a prescribed time after reading his report, the secretary must have it drawn off, with all possible care, in the secretary's book, which he hands to you for ocular inspection and written comment. This book grows from day to day. Each secretary's work appears in it in connection with his name and more or less illuminated with pedagogic red. This book is treated with great respect. It may be handed to a visitor for inspection. It will not fail to be of service to the teacher, purely as a store of records, more than once during the school year.

The secretary's book furnishes many of the requisites of a good composition exercise. The daily report will ordinarily include matter somewhat trying to youthful pens in respect of punctuation and the incidentals of arrangement peculiar to speech abounding in quotations and verbal discussions. Pupils will listen eagerly to admonition on these subjects when they are surely about to be tested as to the immediate availability of their knowledge.

In the upper high-school classes it is profitable to take the pupils themselves into your confidence while you are debating what topics to recommend them for their next compositions. In fact, it is no bad composition itself to let a pupil apply in writing for permission to write on a certain theme. You have, perhaps, as a rule, frowned upon themes drawn from school work. But it may be a pupil has conceived a genuine interest in some subject and has observed something related to it, or has read on it somewhat at large, and can convince you that he meets your standard of ripeness for writing on his topic. If it is a subject that has involved reading in several books and comparison of diverse authorities, the objection to deriving composition matter from printed sources vanishes almost entirely. Such an application for permission to write on a spontaneously chosen topic it is occasionally possible to get. It makes in itself an excellent composition. In it the



applicant should give presumptive proof of competency to deal with the topic for which he is applying. The very fact of spontaneous choice goes a great way towards establishing the fact of the competency of the chooser.

Certain pupils, once upon a time, professed themselves profoundly interested in their *chemistry*. As the subject just then under discussion was *carbon*, they were allowed to write on "charcoal." Now, competency to write on "charcoal" would properly involve the having made it in the laboratory, as is easily done, or the having seen it made in the woods by the charcoal burners; and it is easily conceivable that a youth who, with his wood, his crucible and his fire, had produced a piece of charcoal and had learned the physical changes that take place in the process, should have an excellent topic on which to write. But the compositions that these pupils presented on *charcoal* proved to be all alike in language, and all alike stiff and text-bookish. What the young people had done was to give a page from their text-books, not copying of course directly, but quoting from memory, as they had learned their chemistry lessons. And this was the way they were interested in their "charcoal"!

Suppose you let a class of more advanced pupils name from their number a committee of three or more to confer in private with each other and with the rest, and to report at a recitation as to topics that seem to them desirable for an impending exercise in composition. This gives a class a little responsibility in the matter. The report can be discussed at any length that may seem profitable. If the class appears to be nearly unanimous as to any topic, they should have it as the next assignment, provided, of course, that the topic is of such a nature as to afford scope for individual treatment. One class, in such a case, decided on the *Diary of a School-Girl's Day*. This was a good topic. It caused no rushing to the library to secure the most helpful books. Each pupil's matter was already her own in the completest sense imaginable. The topic was neither childish nor academic. Each diary had the possibility and the right of being interesting. Had the class chosen *The Thirty Years' War* and been allowed to write on their topic, there would have been a scramble for books, and the compositions would have been stupefying in their dreary monotony.

*The Story of Madeline and Porphyro, continued*, proved to be very acceptable to a class of intermediate high-school grade. Topics that allow free play to the imagination are sometimes excellent. Most pupils are constantly reading fiction of some kind, and have some idea



of a plot, though not much of character. But the difficulty with this kind of writing is that it knows no end, and the nascent romance is balked of its *denouement*.

In recitation, in conversation, in many casual ways incident to school life, individual pupils reveal their tastes, their out-of-school employments. Often they may be overheard telling with animation what they have seen or done. Thus hints are borne in upon the seeking teacher, and his search is guided to where the game lies hid. Every pupil has zeal, vivacity, energy, for something. On some topic the dullest scholar ceases to be dull. This topic is not in the rhetorics. Possibly it is not even in that note-book in your desk in which you have collected some hundreds of topics actual or potential. You may have to lie in wait for it, and while you are waiting, to put up with the usual simulacra of actual compositions, or to prescribe those formal exercises which give scope to the more mechanical elements of writing. But the waiting will usually not be long. When the majority of the class are at work on pleasing topics, the laggard begins to have an inner prompting to come forward and confess that he too has seen the world and had his adventures. When he is in this mood, a little encouragement will bring him to the disclosure of his secret. This encouragement can be given in the form of praise bestowed on compositions that in a marked degree shock the academic proprieties. The youth was afraid lest he should create a smile with his commonplace theme. Perhaps what he knows is about grocery stores, carpenter shops, foundries or ship-yards; and he has, all his school life, been used to hearing fine disquisitions on poems or the imposing events of history, or fine languishings over sunsets, or fine portrayals of the delights of summering in cottages by the sea. It will be worth everything to you to capture this youth and to add his style, his tastes, his knowledge, to the ingredients of your cauldron. The academic tradition must be broken with, and the banausic element must be introduced into our schools, if these schools are to be as broad as American life.

What has been said above in opposition to composition topics that require young writers to resort to books should be understood as applying to the use of books as sources of information which is to be presented in the composition. Regarded as objects of interest, books rank properly with other objects suitable for investigation and reporting. Thus, a pupil may find an excellent field for composition work in describing his recent reading. So, for a rather wide reader, "*The Lark in English Poetry*" is an excellent theme, and the young Chaucer

enthusiast may be allowed to write on "*Chaucer's Love of Birds.*" In assigning such topics, however, the teacher should insist that the writers give only such instances as are theirs by the indubitable right of independent discovery. The object is not, in these, or in any other, instances, to get tolerably complete essays on the given topics. A pupil may have become interested in "*Walden*" and so may reasonably have something to say about its author. The wrong procedure would be to assign *Thoreau* as a composition topic and then let the pupil go to biographies and criticisms to make his preparation. Miss Aiken, according to Macaulay, wrote an excellent book on James I. because she was already full of her subject; but she wrote a poor book on Addison because she studied the times of Anne for the sake of writing her book.

Were it necessary to write an elaborate thesis on Composition Topics, a bulky literature on the subject would have to be taken into the account. Such books as those of Laas, Geerling, Apelt and Schmidt, would needs be skimmed for such cream as they might afford. The writer has, however, left the ponderous Germans on their shelves and has drawn solely upon his experience as a teacher. It is well to have some acquaintance with the classics of German pedagogy, in order to estimate them at their true value. They are good for formal philosophizing and preaching. Doubtless some small infiltration of German theorizing into American school practice is conceivable. But a solvent for German pedagogy, that shall render it capable of absorption and assimilation in the American system will long be sought in vain. The lecturers may lecture with all zeal, and the workers who listen may listen with all openness of heart. But the work must go on, and the influences that are to touch it to good issues must come from domestic and homely sources; of all classes of working educators none are, at the present moment, in so hopeful a state as the teachers of English. These, at least, are beginning to see what they do not know and what they need to know. They are seeking, and they will find what they seek.

## WHAT THE COLLEGE HAS A RIGHT TO EXPECT IN ENGLISH FROM THE HIGH SCHOOL.

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CHARLES B. WRIGHT, CHAIR OF ENGLISH, MIDDLEBURY COLLEGE.

WHAT has the college a right to expect in English from the high school? In discussing the question however briefly, a preliminary inquiry presents itself. What right has the college to expect anything? What relation is there between the college and the high school which shall make this paper pertinent? It is a matter for congratulation that able men are giving us their answers with a breadth of thought and a fullness of detail that the importance of the question merits. Lowell touched upon it in his oration at the Harvard Anniversary. President Eliot in the *Atlantic*, Charles Eliot Norton in the *New Princeton*, Doctor Wm. T. Harris in many papers, and Professor George T. Ladd in a recent *Scribner*, all have joined in the discussion. The drift of their conclusions is all in one direction. To each of them, the college and the high school are but parts of an educational whole whose separation can but result in a serious impairment of power. It would appear that the hope of Lowell will soon be realized — “that our higher institutions of learning may again be brought to bear, as once they did, more directly on the lower; that they may again come into such closer and graduated relation with them, as may make the higher education the goal to which all who show a clear aptitude shall aspire.”

When viewed in the light of a somewhat prevalent theory, these words of Lowell look ominous. “The higher institutions” . . . . “brought to bear upon the lower;” “the higher education” — such phrases, for all their innocence, are not universally approved. Some people are so constituted that the very thought of subordination is painful. To play a second fiddle, even to Paganini, would gall them. The manipulation of high-school policy has afforded to educators of such a make-up rare opportunity for indulging their predilections. The high school is to them “the people’s college”; its graduating platform is the educational goal; the high school stands at the apex of an educational system. To fit? — oh, no; its function is to finish. The most dangerous feature of a theory like this is the fact that its source is in vanity, and the vanity of those in authority is communi-



cated too often to the pupils. The normal outcome of true education is humility; "the little almost vanishes when one looks forward and sees how much is yet to do." But the spirit too often fostered by the training of our high schools is the reverse of humble. Take a single illustration from their study of mental science. Were such a study introduced as the means to a proper end; were it treated admittedly in its most elementary phases and regarded simply as a stimulator of thought, as preparatory merely to possible future journeys in the philosophic field, criticism would perhaps be out of place. But often such is not the case. For aught he is told to the contrary, the student's "Fourteen Weeks in Mental Philosophy" is an epitome of the science; its dicta are final and unquestioned. The brighter he is to grasp its principles, the greater is the danger in which he stands; the easier it is to fall into the flippancy of a self-satisfied egotism so fatal to all development of the true educational spirit, which is simple, earnest, searching. He is hardly to blame if he drops the study with the firm conviction that, to use the expression of Stanley Hall, "he has taken the absolute by the wool." The atmosphere of his school life, every day for three years, has been nourishing such convictions. I speak with feeling as one who suffered in just that atmosphere. I trust I am by nature modest—my friends agree that I ought to be—yet I fear I thought in '76 that my education was ended; that all which was really needed had for the most part been obtained. The President of the Board of Education told me so when he handed me my diploma. And I believed him; I would have been wise beyond what is written had I not believed him.

So much for the practical workings of the apex theory. Setting aside for the time being all other considerations, its mere effect on unformed and susceptible minds will stamp it as a vicious theory. It is a theory which for many years has been alienating the college and the high school and puffing out the latter's course of study. I rejoice in the belief that the era of expansion has passed and that the era of contraction is being permanently inaugurated; that the people are to lose this boasted "college," to be made the gainers by a unified educational system; that high-schools will no longer, as too many of them have done, depreciate the college education, with the consequence, to quote Professor Ladd, "that the different years of school life too much resemble the different successive sessions of our legislatures."

If it be urged by any that Lowell and Norton and Eliot and Ladd, identified as they are with college interests, are prejudiced against the



public school, I would answer that among true thinkers, whatever the field of their interests, there is no such prejudice. To declare that the true work of the high school is a work of preparation for the college course is not in the least to depreciate the value of that work; it may very well be that a clearer understanding of its real function will but serve to enhance its importance; for one I believe it will. But there is one, at least, of the men whom I have mentioned, who cannot be held in suspicion. As an educator Doctor Harris belongs to us all, yet as one who has spent a life-time in the service of the public schools he is peculiarly their own; and his testimony is unequivocal. "If the high-school teachers," he tells us, "continue to be lukewarm toward college education, and perhaps go so far as to discourage their pupils from completing their education in colleges after graduating from the high school, it will follow that the men of amplest directive power, the leaders in literature and the molders of public opinion, especially on the subject of education, will not be furnished by the common school system." "It is more important," he goes on to say, "that the high school should regard itself in the light of a preparatory school for college than that the grammar school should train its pupils to look forward to the high school." And he gives it as his opinion that "the personal influence of the high-school teachers, in one year's time, will avail to double the number of high-school graduates who seek a college training."

The college is ready and anxious for this co-operation. And well she may be. It is good educational policy and business to boot. Nor in asking the school to join her in the carrying forward of a common plan, does she arrogate to herself any importance on the score of her superior position. It is possible, it would sometimes seem, that she leans to the other side; that her attitude is somewhat that of the woman who wanted help. She wanted, she said, a servant who would not be above putting herself on an equality with the rest of the family. It is a common end we strive for,—the development of educated men. We cannot afford the notion that the goal of student effort is the high school graduating platform or the college commencement stage. Let us place it far beyond them, even at the ending of the years. It is not in high-school work alone that humility should be taught and practised. It will be well for education when the college comes to be looked on, not as the be-all and the end-all, but as the fitting school of the University. Then senior will be spelled with a small *s*; the baccalaureate honor will have become a mile-stone—he who reaches it will do well, but he

will do better who passes farther to more substantial achievement. And all a preparation for the school to which men pass, whose years are a life-time, whose degree is culture in its best sense.

I have said this much of relations because it bears directly on the topic to be considered. If the true work of the high-school is preparatory, the field of its activity should be largely among the rudiments. And this, I take it, is just as true for the students who go no farther. I can conceive of a man so trained in the rudiments of knowledge, so mentally developed and quickened by adequate elementary instruction, that the world will be forced to admit him an educated man; I cannot conceive that without such training he can possibly stand the test. There need no excuse be offered for the simple nature of the following suggestions; experience teaches that a knowledge of the rudiments is the crying need of the time. To put it no more strongly, there are a few fundamental items of English knowledge not always brought to the freshman class. Surely we have a right to expect that the boy sent to college shall be a good speller, a legible penman, an intelligible reader, and a thinker who can express his thought. The chances are that he will be found wanting in some three of these four particulars. Improvement, if we get it, must result from faithful effort in the secondary schools; these things rarely come by nature, Dogberry to the contrary notwithstanding.

Let us look for a moment at spelling. This is no quixotic plea for perfection; occasional slips in spelling should be pardoned to any one. They may even be regarded as in one sense creditable, for an easy mastery of English orthography is *prima facie* evidence of guile. But habitual poor spelling is a disgrace, and pupils should be taught to regard it so. Strive to make it "very stuff o' the conscience" with them that they spell their tongue correctly. Appeal to their ambition, touch their pride — do anything rather than let them come confirmed in habits we cannot break; cannot for this reason, that they are callous as pachyderms on the subject of their deficiency. Did time permit, the other three essentials might profitably be discussed. Let us note them all a second time: good spelling, legible writing, intelligible reading, and well-expressed thought. No flourishes of penmanship; no tricks of elocution; no special graces of literary style; only honest, homely, every-day ability in the handling of our English speech. It needs no costly outfit or extra paraphernalia. There is no demand for a single added text-book or modification of English work. But it calls for patient effort and high enthusiasm, for a clear purpose and unfalter-

ing persistence, and these, in the words of our subject, we have a right to expect.

But we have a right to expect more; at all events we hope for more. The points already touched on are connected with the mechanism of speech, and the mechanical phase is by all odds the most important for the preparatory school, yet it is not the only phase demanding attention. There is need and time for a certain amount of judicious literary study. But what is judicious literary study? The question is easier asked than answered. It sometimes seems as one watches their efforts — I trust I shall be pardoned for a fancy so exquisitely absurd — that our high-school teachers are a little vague on this somewhat vital question. How shall they go about it? Shall they start at the beginning and work down? or begin at the present and work back? Shall they take an aim at particular birds? or shut their eyes and bang away at the covey? If with any this vagueness is really more than my own imagination, if the very broadness of the field has a tendency to confuse, the trouble perhaps arises from indefiniteness of purpose. If the end in view were clearer, we might better bend our methods in the direction of its accomplishment. I suggest we aim at securing two results. The first is this: to fix in the mind of the pupil a comprehensive outline of our literary history; as much of detail as you care for, but the outline first and surely, with the leaders in their places. I asked a freshman class to tell me Macaulay's century. The consensus of opinion was in favor of his having been a contemporary of Shakespeare, though one was inclined to put him a century earlier and several thought he did not come till a century afterward. It was left for a girl to tell them he had been dead only thirty years. Macaulay a contemporary of Shakespeare! It is an amusing answer; but when one reflects on the ignorance that goes with it, when he thinks how much that is brilliant in modern criticism and politics is linked with that potent name, when he calls to mind the essays and the reforms of '32, he can only cry, "The pity of it."

The second end to strive for is a development of the appreciative faculty. One thing may safely be predicated of our pupils; they are reading, and the world is all before them where to choose. Their reading will be ordered largely by their ideals of literary excellence. The raising of those ideals, then, is our chief work as teachers of literature. And this must be done by something other than encyclopedic detail. The outline for which I have argued need contain nothing but the salient features of our literary history; in my own opinion, the less

detail the better. It matters very little that a boy knows nothing about Thomas Fuller, if only he has been so trained that he will love Thomas Fuller when he does meet him. In these matters, actual acquisition is not measured by the page. Whatever has proved enduring in our own experience was brought to most of us by the mere living for a season in the pleasant atmosphere of literary study, and so it will be with them. If our students shall have caught something of appreciation for what is best; if their ideas as to what *is* best shall have been at all advanced, the fact that many a worthy has been untouched, perhaps unheard of, is of comparatively little importance. Those were indeed true disciples at Ephesus even while they declared to Paul, "We have not so much as heard whether there be any Holy Ghost." If a boy can be so developed that he really knows a good thing when he sees it, the problem of his reading will have been solved, for it will follow as the night the day that he will choose the good by preference.

As a test of the appreciative faculty no exercise is better than the paraphrasing of worthy matter. I gave to a freshman Tennyson's little poem, "The Deserted House." As preliminary to his interpretation, I take the liberty of quoting its familiar lines:

Life and Thought have gone away  
Side by side,  
Leaving doors and windows wide:  
Careless tenants they!

All within is dark as night:  
In the windows is no light;  
And no murmur at the door,  
So frequent on its hinge before.

Close the door, the shutters close,  
Or thro' the windows we shall see  
The nakedness and vacancy  
Of the dark, deserted house.

Come away; no more of mirth  
Is here or merry-making sound.  
The house was builded of the earth,  
And shall fall again to ground.

Come away: for Life and Thought  
Here no longer dwell;  
But in a city glorious,  
A great and distant city, have bought  
A mansion incorruptible.  
Would they could have stayed with us!



And this is what he made of it: "The last people who lived in the house moved away, leaving the doors and windows open. The old house looked dark and dreary, and the door had been blown off of its hinges, adding to the desolate (*sic*) appearance of the place. The poet thinks that if the doors and blinds are closed it will lessen the dreary aspect and hide the bare, deserted walls within. After this has been done he leaves the house to sink, by decay and neglect, back into the earth, from which the materials of which it was made had come, and goes to a beautiful and more pleasant home in the busy city with a desire to take the old house, and the scenes of memories dear along with him." Take him for all in all, that man ranks deservedly among our brightest students, yet surely there are things not yet dreamed of in his philosophy.

We need have no fear of the outcome: it is a work with certain and quick returns, this development of the appreciative faculty. The mind of the average student is wonderfully susceptible to much of literary beauty. I never apportion the plays of Shakespeare for individual study, but almost every man believes, when he gets his paper finished, that the play which happened to fall to him is the finest that Shakespeare wrote.

I have tried to avoid the didactic, but I cannot close without a few suggestions. Start a library if your school has none already; one hundred dollars, as prices go, will give you a good equipment. Direct your pupils' reading: make it your duty and it will become your pleasure. To the extent of needed corrections, make every recitation in every study a lesson in English as well. Above all, banish the perverted notion that certain lines of teaching should only be expected in the lower grades. May I tell just one more story? It happened in Baltimore years ago to a student at the Johns Hopkins University. His name was —, and his gall was divided into the three parts of impertinence, superciliousness, and conceit. It was at Doctor —'s lecture. There sat our little Doctor, mild-mannered, diffident — he proved himself a hero, but he didn't look it — and there below him sat the insufferable —, with a general air of proprietorship and his leg thrown over an adjoining chair. The Doctor told him to take it down; that the attitude was not gentlemanly in a class-room. He took it down, with the remark that he didn't know a University was a place to teach deportment. "It is," said the little Doctor, "when it is necessary." And there is the truth in a nut-shell: nothing that really needs to be taught is unworthy one's powers as a teacher, nor is any school of too high a grade for a place in which to teach it.

## THE EVERY-DAY WORK OF THE ÉCOLE DES CHARTES.

WILLIAM E. MEAD, WESLEYAN UNIVERSITY, MIDDLETOWN, CONN.

IN one of the older quarters of Paris, a few minutes to the north of the Rue de Rivoli, is a narrow street not much haunted by strangers—the Rue des Francs-Bourgeois. In this street, almost facing each other, are two notable buildings, each bearing the words *Liberté, Égalité, Fraternité*, and each floating the tricolor of France. The one is the central office of the *Mont-de-Piété*, the great municipal organization which lends between fifty and sixty millions of francs yearly on old jewels and family treasures. The other is the picturesque old palace where are preserved the archives of France. Almost opposite the entrance of the *Mont-de-Piété* is a modest, three-story building with a carved head as the key-stone of the arched entry. On each side of the entrance are posters with the heading, “*École Nationale des Chartes*.” This plain—perhaps I ought to say ugly—little building is a wing added to the Palace of the National Archives, and is the seat of that famous school of which the majority of intelligent persons have heard, as they have heard of the Koran, and of which they could tell about as much. I find even that very well informed Parisians have but an imperfect conception of the purpose of the school. And yet the *École des Chartes* does a work absolutely unique, and worth more than a passing notice. Put in a word, the purpose of the school is to study the middle ages, and to train students to deal with the sources of information concerning them.

Our best introduction to the school will be the printed announcement of the course of study for the past year, which was posted in various parts of the city, and which is as follows:—

### ÉCOLE NATIONALE DES CHARTES.

PALAIS DES ARCHIVES NATIONALES. RUE DES FRANCS-BOURGEOIS, No. 58.

Year 1889-1890.

#### *First Year.*

- |   |                    |   |
|---|--------------------|---|
| 1. Paleography . . . . .                              | L. Gautier.*       | { Tuesday, 9.30 A. M.<br>Saturday, 9.30 A. M. |
| 2. Romance languages . . . . .                        | P. Meyer.*         | { Tuesday, 2 P. M.<br>Saturday, 2 P. M.       |
| 3. Bibliography and classification<br>of libraries. } | A. de Montaiglon.* | Wednesday, 2 P. M.                            |

*Second Year.*

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|--|--------------------|---|
| 1. Diplomatics   | A. Giry.           | { Wednesday, 12.30 M.   |
| 2. History of the political, administrative, and judiciary institutions of France. | J. Roy.            | { Thursday, 9.30 A. M.<br>Wednesday, 9.30 A. M.<br>Friday, 1.30 P. M. |
| 3. Sources of the history of France  | S. Luce.*          | Friday, 9.30 A. M.  |
| 4. Classification of Archives  | A. de Montaiglon.* | Thursday, 2 P. M.   |

*Third Year.*

- |   |                   |   |
|---|-------------------|---|
| 1. History of civil and canonical law in the Middle Ages. | A. Tardif.*       | { Tuesday, 11 A. M.<br>Saturday, 11 A. M. |
| 2. Archeology of the Middle Ages                          | R. de Lasteyrie.* | { Monday, 12.30 M.<br>Tuesday, 12.30 M.   |
| 3. Sources of the history of France                       | S. Luce.*         | Monday, 9.30 A. M.                        |

One word in general on this course. It will be observed that the whole plan of study forms a compact, consistent whole, with a systematic gradation of subjects in the order in which they can be approached with the least expenditure of time and labor.

The subjects indicate at once the purpose of the school. The course in paleography is designed to remove all difficulties in the way of understanding the written documents of the middle ages, in so far as the difficulty consists in deciphering the characters employed by the old copyists. The course in Romance languages aims to trace the development of modern French from the popular Latin by comparative study of old French and Provençal. The course in diplomatics is a continuation of the work in paleography. The other courses are self explanatory. I need only call attention to the repeated emphasis laid upon the word *sources*, and the express mention of the middle ages. Further remark upon the subject-matter of the work of the school is perhaps unnecessary; but a word upon the kind of men that the school aims to produce may not be out of place. The *École des Chartes* does not attempt to train men of letters, who will turn pretty phrases, and tickle the curiosity of the ordinary reader. It is rather a practical school for training critics, whose acuteness and learning are often far in advance of their power of literary expression.

The whole spirit of the school may be put into a word or two. "Always go to the source," said Gautier in his opening lecture. "Take no man's authority, least of all mine. Verify every reference, keep an exact record of everything you observe. Compare every statement that you find in your books with the original authorities. Be content to hold your judgment in suspense, if you have no original source upon

\* The star which I add to the names of most of the professors indicates that they are decorated with the cross of the Legion of Honor. This is, however, only a portion of the recognition many of them have received.

which you can base an opinion, and remember that the original source is in all cases the court of last appeal." So much for the spirit of the theory. The way in which this advice is put into practice before the eyes of the students seems to me to be the very perfection of object-teaching.

The specific purpose of the school, as I have in part shown, is to train critical paleographers; men who can decide by a glance at an undated manuscript to what country it belongs, determine its relative value as compared with other manuscripts, and the probability of interpolations or falsifications. In this class of work the school teaches how to criticise the sources of history.

It also teaches its students how to arrange libraries and archives on a scientific plan, to catalogue books according to the simplest and clearest methods; in short, it gives that scientific, systematic training for literary investigation which has made the pupils of this school an honor to France.

From the graduates of the *École des Chartes* are selected all the professors of the school, all the archivists of the eighty-seven departments of France, the helpers in the works of the Academy of Inscriptions, and, "in general, the librarians, or the employés in the public libraries of France, and the Archivists of the National Archives." Each graduate holds the diploma of "Archivist-paléographe."

A word now on the conditions of admission, and on the history of the school, and then we may pass at once to the daily routine of lectures and recitations. Young men under twenty-five years of age, who possess the diploma of bachelor of letters, are admitted on trial after a vigorous examination held in November, and definitely admitted some months later. Once a member of the school, a student is held to the strictest account. Absenteeism is an unknown sin. Not many students are admitted, for there is little room for more than fifty or sixty men; but anybody who happens to be in the city is at liberty to attend the courses free of charge, and without asking permission. Something like twenty-five persons attend the courses of the first year, if we include the outsiders. In the highest class I have counted a dozen or fifteen students. Of their work, I shall have more to say a little later.

The *École des Chartes* has been fortunate in having had little or no history. It was founded in 1820, just at the time when the great writers of the Romantic period had opened the eyes of France to the vast importance of the middle ages. The principal, if not the only, notable event in the history of the school, was its reorganization on the



31st of December, 1846, which placed the administration upon its present basis. In all the checkered history of Paris during the past half century, the school has gone on with its investigations. Even during the Commune the professors kept bravely at their work, though, as Gautier remarked, "Students show a certain lack of interest in paleography when they know that a shell filled with petroleum may at any minute drop in upon them. I had then only three hearers."

After this rapid glance at the leading features of the school, it will be suggestive to follow the daily routine of instruction, and to compare it with similar work in the German universities.

We will assume that you are more energetic than most Parisians, and that you have found your way to the school about nine o'clock in the morning. The printed programmes announce the work of the day as beginning at half past nine. On the first morning I trusted to this announcement, and found it to be a euphemism for nine o'clock. You step through the little door, which forms part of the big one, and enter the plain, oblong court. Following the direction of an arrow pointing to the *Secrétariat*, you pass through two doors in the further corner on the right, and enter the single lecture-room, which looks out on the court. The opposite entrance is for the students, who thus enter the school library. The rooms are opened in the morning by a little yellow-faced man in a black coat and a black skull-cap of glossy satin. This unobtrusively ubiquitous attendant seems to have grown up with the school. He anticipates every wish, and is quite as necessary to the work of the school as any professor in it.

There is but a single lecture-room, an oblong apartment about eight paces long and six paces wide, the walls tinted a reddish brown, and the wainscoting of plain, hard wood. At the right side of the room, as you face the long, pulpit-like desk, is a large recess, well lined with books. In the centre of the room is a large oval table, surrounded by low wooden benches without backs. A second row of benches forms an ellipse about the first; and these are in turn enclosed by a high wooden "pen" into which none but students may enter. The lecture-room is a model of bad lighting and poor ventilation. There is no provision for lighting with gas. If the students cannot see well, the little yellow man brings in three lamps for the oval table, and candles for the professor and chance listeners.

Shortly after nine o'clock in the morning, the students begin to stroll in from the adjoining library, and take their places at the oval table in the centre of the "pen." Other people select one of the little black tables at

the sides of the room. The limited size of the school is emphasized by the fact that there is room at the centre-table for only about eighteen students. By squeezing, they might make place for one or two more. Before each session the register goes round, and each student signs his name as a proof of his presence. Each professor has his book with the date written for the day, and he signs his own name after that of the last student.

As the young fellows are in the midst of their lively conversation, they hear the door open and see a large bustling man enter, wearing a tall silk hat, and a big bushy beard tinged with gray. This is Léon Gautier, author of *Les Épopées Françaises*, editor of the *Chanson de Roland*, and professor of paleography in the *École des Chartes*. He deposits his hat on the desk, gives the numbers of the manuscript *fac-similes* for the day to the little yellow man, who has brought in a glass of water on a plain white plate, and then climbs upon a chair for writing more comfortably on the black-board back of his desk. He takes each day a single letter of the alphabet, giving the forms it has assumed since its appearance in the Phenician alphabet. The students copy as he writes, and are careful not to lose a word of his running explanations. Then begins the real work of the day. Gautier resumes his place, and designates the number of the *fac-simile* with which the session is to begin. The texts for the *fac-similes* have been very carefully chosen. Each is intended to be typical of some great class of documents, and these range from the earliest medieval Latin charters to state papers of the seventeenth and eighteenth centuries. After the *fac-similes* are handed around, Gautier proclaims silence, and gives a short descriptive introduction to the text. Then he starts one of the young men to pronouncing and translating the Latin or the French from the *fac-simile*. The skill of the students in deciphering the crabbed ligatures of the old monkish copyists is beyond all praise, but the carelessness of some of the young fellows in accenting antepenultimate syllables when only penultimates are in order would earn them a trouncing from at least one Latin teacher I could name. Gautier is the most enthusiastic and certainly the most amusing of the professors of the school. The whole man is in his work. He is all life and excitement, and at every turn does something to attract your attention. He gesticulates, he pounds on his desk, he modulates his voice like an orator, he makes an amusing remark at his own expense. Dignity enough of a sort he has, too, but he does not waste it. You cannot help feeling that he is chiefly concerned to have you know how interesting the middle ages are.

His whole interest is so absorbed that he can hardly let a man pronounce half a dozen words without interruption. "*Bien! Bon! Allez! Allez! Vite! Courage! Qu'est-ce que c'est que ça? Marchez! Bon! Oh, non! Très bien! Impossible!*" and so on without end.

All of a sudden there is a hitch. Some crooked ligature or abbreviation blocks the way. Gautier climbs up on his chair, expands the contraction, and gives a list of half a dozen analogous cases. Then at an unusual word or phrase he spends from five to fifteen minutes in a historical or philological digression in which he displays an amazing wealth of research. Every moment is valuable to him. He runs a few minutes over his time at each session. One morning he was obliged to be absent, but he made up the lost period on the afternoon of the following day, though it was so dark that we could not see even with candles. He is impatient in the last degree, but his is a winning, jovial impatience, which amuses his students, and keeps them closely to their work. I have never heard him make an unkind remark, but I recall countless instances when he has taken advantage of a trifling mistake to deliver a passing shot. "Some of you," he burst out one day, "will be librarians, some of you archivists, some of you nothing at all." A student made a slight blunder in reading his *fac-simile*. "You deserve twenty years in prison for that," was Gautier's comment. A moment later the young fellow expanded correctly a difficult contraction. "Good! very good! I'll have your sentence reduced."

Of course, all this is mere by-play. A very large proportion of the session is devoted to most serious work. The method is simplicity itself. It consists in passing by nothing that can afford difficulty. A date expressed in the fashion of the early middle ages, is the occasion of a discourse on early French chronology. The form of invocation at the beginning of an ancient Latin charter offers a text for a dissertation on the criteria of the genuineness of historical documents. The signatures at the end of a charter afford an excuse for treating the history of proper names and for an account of the chief officials of the king's court. Allusions in a charter to feudal exactions call forth a systematic description of a village of the middle ages, of the houses of the people and the chateaux of the great lords, the influence of the church, and the restrictions imposed upon the power of the lords of the church and the lords of the soil. Then another allusion leads to a dissertation on food and wages, with comparative glances at the present state of French family life.

I give these illustrations about in the order of their occurrence, for



though Gautier has carefully prepared everything in advance, so that he knows to a minute how much time will be left at the end of the hour for scrambling through another *fac-simile*, he gives these little historical digressions as though they had occurred to him by the purest accident.

I will not say that Gautier has no faults as a teacher. His incessant interruptions — *prodding*, I believe is the exact word — cause some waste of time, and some decrease of comfort to nervous people. But his intense enthusiasm, his really vast knowledge of his subject, his perfect openness in admitting his earlier explanations to have been false, and his willingness to help his students outside of working hours, far outweigh the trifling defects of his class-room method. He spends a large part of his day in the adjoining Palace of the National Archives, and there, says he, as I have repeatedly heard him tell his students, “I am entirely at your service.”

At two o'clock of the days when Gautier has his course in paleography, the same students reappear in the same places, but nothing can be more different than the sessions of the morning and of the afternoon. As the bell strikes the hour, a tall, slender, compactly built man, with clear-cut features and a closely kept beard, enters and rapidly takes his place. This is the famous Paul Meyer, director of the *École des Chartes*, and without doubt, the best known living philologist in France. His friendly rival, Gaston Paris, gives his attention more to the history of literature than to the history of the language. Meyer has a most intelligent expression of face, which I am tempted to call American, and that balance of features which renders caricature futile. Frenchmen pronounce the name something like *May-aire*. He has traveled widely in the course of his studies, and alludes easily to whatever illustrates his subject, though he may draw upon half a dozen languages, and take you to as many countries in the space of half an hour. There is a freshness in all he says that can come only from personal contact with the objects of which he speaks.

His manner is the polar opposite to Gautier's. Meyer is as cool and collected as Gautier is nervous and excitable. He preserves the same easy tone from first to last that a cultivated man adopts in the conversation of the drawing-room. His ideal in his lectures appears to be to talk as interestingly and yet as scientifically as possible. If he has something dry to develop — as, for instance, the phonetics of French grammar — he apologizes for being obliged to delay his hearers on a matter of apparently little interest. This is a purely French trait.



I have never heard German professors make excuses for being dull, though some of them raise dullness to the level of a fine art. Meyer has one defect of manner that would be fatal were it not for the masterly clearness and interest with which he develops his subject. He has a voice which, though smooth, is pitched in the highest known key. Every two or three sentences end with a sharp little bark. For a few minutes, when I first heard him, I was tempted to smile inwardly, but after a little, I forgot everything except the subject he was treating. In fact, I have never heard Meyer without being charmed with the firmness of touch and the scientific precision with which he develops a difficult subject, proving every step by original authorities of the period he is treating, and making as clear as sun-light to his dullest hearer exactly what the most advanced scholarship of our day has adopted as the probable truth.

His method is essentially German, but it is German method in a French setting. He is too broad a man to be a slave to any particular system. He is familiar with English and German culture, for he has spent much time both in England and Germany, but his greatest strength lies naturally in the field of French and Provençal and Italian and Spanish and Portuguese. It is no small advantage to a student to be thus under the eyes of a recognized master of his subject, who glosses no facts and passes by no difficulty. Where he does not know he is content to say so. He is singularly open in his treatment of facts. I heard him one day ridicule the notion that the French language is the perfection of all existing tongues. The ease with which he demolished the chauvinism was as charming as his arguments were convincing. His course on the Romance languages began with a geographical and historical account of each of the branches of the great modern Latin family of languages. He commenced with the most distant group, traced the geographical limits on the map, and so went through each in order. There was just enough reminiscence of travel to season the whole, and relieve it from the monotony of a catalogue of names and places. Even the Basque and Celtic languages, because represented on French soil, received each their careful study, with an estimate of their importance to the student of French philology. After paving the way for the study of the French group, he began the systematic study of the development of the popular Latin into the forms of Provençal and ancient French. The fate of each of the vowels as modified by its particular surroundings he illustrated by a host of examples. This is his uniform method. Any illustrative material—

be it a modern dialectical form, or the *argot* of the streets, or an analogous form in another language—he seizes upon to aid in the solution of the problem of the day. The result is that the students who follow this course throughout the year become insensibly familiar with the most advanced methods of philological research, and thus prepared to continue the same work in independent studies of their own.

I have gone thus at length into the methods here followed, because I have always found that I learn more from studying the methods of a successful teacher, than from any amount of general advice as to how literature should be taught. Then, too, these methods, though saturated with the personality of the teachers, are typical of the methods of the entire school.

After entering thus in detail into the class work of the two professors best known, it is hardly necessary to go through the whole list of instructors in the same way. As for the course in diplomatics, it is, as already remarked, a continuation of Gautier's course in paleography. The work is pushed always to the earliest sources, and scientific tests of the genuineness of materials for history are made familiar to the students. Giry is a much younger and quieter man than Gautier, but his methods are thorough, and he displays an enviable acquaintance with his subject.

I must not, however, pass by the remaining courses without calling attention to the admirable treatment of the archæology of the middle ages. The lecturer, de Lasteyrie, is the very image of an American professor of my acquaintance, tall, of the fair type, clean shaven except for a heavy moustache, and possessor of the terminal nasal drawl popularly supposed to be the most distinctive trait of Americans. The work in archæology is largely directed to architecture. Each architectural element is traced from its Greek and Roman prototypes, where such exist, and the development followed out in the great works of the middle ages. Nothing is left obscure. Every lecture is illustrated by a wealth of photographs and wood-cuts and plates. To supplement these, the professor, who is an excellent draughtsman, develops before his hearers an outline of the leading features of each group of structures, thus doubling the clearness and interest of his explanations. The appeal to the eye is constant. It is object-teaching in its perfection.

It would be easy to enter into details in following thus closely the workings of each of the departments of the school, but I suspect that there are limits to the patience even of the readers of *The Academy*.

I must, however, devote a few words to a comparison of the work of the *École des Chartes* and that of the German universities.

Of course, much of the work of the school is of the same character as that done in German universities. But there is this essential difference in the order in which it is pursued. If a German student wishes to follow a systematic course of study in, we will say, German philology, he is as likely as not to find that the professor he wants most to hear will discuss some out-of-the-way corner of his subject, doubtless of great value to the advanced specialist, but about as intelligible to the young student as the Cherokee alphabet, if there be such a thing. By judicious selection among the twenty or more universities at his disposal, the German student does manage to get a grasp upon his subject such as few Americans can rival. But he has well moved about Germany before he has taken his degree. All this migration is, in its way, of decided advantage, but I suspect that the immature student loses considerable time, and really works at considerable disadvantage. I am satisfied that many German students would welcome a clearly defined course such as is offered by the *École des Chartes*. Here everything is so planned that one part of the course fits into another part, with the result that the student has at the end of three years really covered his subject. Nothing essential has been omitted. He is ready for any sort of literary or historical investigation that may fall to his lot.

I do not care to be understood as criticising the unlimited freedom of the German universities, for this freedom is the very breath of their life; but I cannot overlook the advantage to a school which, like the *École des Chartes*, aims to do but one thing, and that, to study the middle ages, of a well-constructed, harmonious course.

Among other differences I note that the students here are really divided into classes, to which they are admitted and out of which they are passed by examinations occurring at stated times. In a German university, on the other hand, a student takes his examination when he is ready for it, and when his professor is ready for him. A definite course is unknown; and there is nothing to prevent a German student from pursuing his studies for life, except that his pocket-book grows lean and his head (to borrow a bit of student slang) grows mossy.

Another difference appears in the arrangement and the length of the lectures. With few exceptions a German professor lectures forty-five minutes, and begins at a quarter past the hour announced. At the *École des Chartes*, the lectures begin exactly at the stated time, and last an



hour and a half ; so that Gautier, for instance, who gives two sessions a week in paleography, offers as much as a German professor who lectures four times a week. Of course, in the German *Seminar* the hours are much the same as those of the *École des Chartes*. As regards payment of professors, a German professor relies for a part of his support upon the students' fees. Here, everything is absolutely gratuitous, and provided by the state.

In thoroughness the work of the school compares favorably with any I have seen in Germany. From first to last there is rather more *Seminar* work than one finds in the German universities, for it is rare that the German *Seminar* devotes more than two hours a week to a single subject. The methods of the class-room are in every sense as scientific as the German, though of course adapted to the special needs of the school and the degree of advancement of the students.

Taken as a whole, the students appear to be very bright fellows, really not so different from German students as one might expect. Most of them are rather better dressed than their German rivals, and most of them wear silk hats, which, by the way, they do not swing in tremendous curves as German students swing their little hats and caps on meeting an acquaintance. I am a little curious to know what would happen to a man bold enough to bring a tall silk hat into the ordinary German university lecture-room, but I am not likely ever to see the experiment made. In point of behavior in the class-room I think I must give the preference to German students. I have never heard a German professor call his hearers to order, as Gautier often does, but that is because no German university student dreams of being out of order in the lecture-room. He reserves his conversation for the corridors and the *kneipe*. On the whole, however, the students of the *École des Chartes* are a very gentlemanly set of young men, and they deserve all credit for the high tone of manners and scholarship which they preserve to the school. I hardly know whether it is just to compare in point of scholarship a body of picked men such as these students of the *École des Chartes* with the average men of the German universities. But if we take the German *Seminar* men who are accustomed to work under the eyes of the professor, there is really no great difference, in so far as my experience goes. The German student is probably more systematic, and more likely in later years to push his researches to the remotest point possible ; but at the stage where I am comparing the two sets of men I am unable to choose between them. In point of brightness and intuitive perception of the merits of a question, I incline to think that the



balance is in favor of the French student. The superiority of the German student in later life is quite as much due, I think, to the intense intellectual life which he finds about him, and which compels him to intellectual exertion if he wishes to maintain his position, as it is to original ability. Yet, of course, race difference must count for something, and it counts here as in other matters. We must not forget, however, that the students of the *École des Chartes* are trained in methods as thoroughly German as those east of the Rhine; for this school is the most critical school of its sort in France, and one which Germany itself cannot parallel. It has compelled the admiration even of the severest critics of that land of universities. With a glow of just pride, Gautier quoted in his opening lecture the remark of the great historian Mommsen, who, though a Gallophobe of the purest water, observed one day in conversation with a distinguished Frenchman, "After all, in spite of the war, you have something left yet in France."

"What is that?"

"The *École des Chartes*."

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## HOW GYMNASTICS ARE TAUGHT IN SWEDEN.

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BARON NILS POSSE, BOSTON, MASS.

Within the last year or two Swedish gymnastics have taken long strides toward being introduced as part of the American system of education. During this time much has been written on the subject and a great deal more has been exhibited practically, not only in Boston but in other cities as well. The system, introduced in Waltham, Northampton, Brockton, Somerville, Salem, Lynn, Worcester, and emanating from Boston, has found its way to Brooklyn, N. Y., Hartford, Conn., Indianapolis, Ind., and to many other cities in the east and in the far west.

It has been said that Swedish gymnastics constitute a "fad" of to-day, but it is fair to presume that they have "come to stay," for truths like those on which this science is based are not evanescent, they grow more and more admirable with each closer inspection. Swedish gymnastics have stood the test of generations of learned investigators,

and yet they remain almost unaltered in the foreground, and are still acknowledged to be superior to all gymnastics up to the present day.

In order not to weary the many who have already had explained to them the theory of this system, I shall discuss a subject which may be of more practical interest, that is, how to introduce gymnastics into the schools with the best results; for all the theory in the world would help but little if there were no practical application to go with it.

In teaching, the object is not to teach a great deal, but to teach well. The desirability of a teacher's knowing most thoroughly the theory of his subject is indisputable, and there can be no doubt that a wide and diversified knowledge broadens a man's character and benefits him in many other ways; yet we often find that the teacher who has confined himself to the mastery of one subject and has accomplished it, is the most successful. The teacher who has a smattering or a "picked-up" knowledge of all kinds of gymnastics is the one to be the most dreaded; he is the one who will go the farthest and accomplish the least. He knows so much that he has no way of putting his knowledge into practice. The experience of every teacher of gymnastics may be summed up in a few words: (1) beware of the self-taught instructor; (2) of the one who has had only an elementary training; (3) of the one whose training includes everything under the sun. More respect is due to the teacher who conscientiously applies one system of gymnastics, though it be inferior, than to him who uses "the best of the American, the German, the Delsarte and the Swedish systems," and better results may be expected in the first case than from the "eclectic" teacher.

Perhaps the best preparation for introducing a new thing is to find out what others have done, so it may be helpful to speak of the manner in which gymnastics are taught in Sweden, especially since Swedish gymnastics are coming to be so extensively adopted.

The schools of Sweden may be divided into two great classes, the free schools, and the schools where tuition is paid; both of these being under the supervision of the government. The former give instruction only in those branches, a knowledge of which is necessary to enable men and women to take an intelligent interest in the affairs of the nation. The latter are divided into two grades, the grammar schools and the high schools, or *gymnasia*. We also have three colleges, one in Upsala, one in Lund and one in Stockholm, and one more is being established in Gothenburg. These grades differ essentially from those of the American schools. Our free schools correspond to grammar

schools, our grammar schools to high schools, and our gymnasia to colleges in America. A high school or gymnasium diploma from Sweden (no matter from what part of the country) may be accepted here as the equivalent of A.B. (Harvard). The average age of our high-school graduates is 21.

We have no kindergartens, the Swedish mothers preferring to take sole charge of their children's early training, and though the grammar schools have so-called "preparatory classes," the majority of our children are educated at home and taught morals and manners before they are put into the public schools.

Sweden is a country of specialists. In all the schools of high grade, each teacher gives instruction in a certain branch for which he has fitted himself with the utmost care; he is a master of that particular subject and teaches nothing else. The free schools are conducted very much like the public schools of America, having for each room a teacher who teaches all the branches. These teachers, however, do not attempt to give instruction in gymnastics, unless they have had a normal course in this branch; for we do not believe that "any exercise is better than no exercise at all." To apply gymnastics without knowing how, would be just as dangerous as to practice medicine without previous special study. In the larger cities, like Stockholm, a special teacher goes through the school once a day and gives the exercises in each room, since the free schools are not supplied with gymnasia. Chairs and desks are used as apparatus, and it is surprising to see how the trained teacher makes these simple paraphernalia answer all gymnastic purposes.

When the exercises are given in the school-room they seldom occupy more than fifteen minutes a day, a small dose, which when oft repeated, produces more effect than if the lesson lasted thirty or forty-five minutes, and were repeated only twice or three times a week. Every school has a spacious, graveled yard, and here, in some of the free schools, apparatus is put up. When the weather permits, the teacher gives the lesson out-of-doors and uses these appliances. In the smaller country towns, gymnastics have not been put into the schools as thoroughly as might be desired; but money in those places is scarce and a special teacher demands a good salary for his services. As a rule, however, there is at least one teacher in the school who has had an elementary course of gymnastics in the "seminaria" or normal schools, and who takes charge of the physical exercise. It is to be especially noticed that these instructors do not attempt movements in which they have

had no instruction, and of which as a consequence they know very little.

If we turn now to the grammar schools and gymnasia or high-schools, we find that every one has its own gymnasium in the same building, or else is located near some gymnasium to which the children are sent once a day for exercise. It is needless to say that each school has its own special teacher of gymnastics, always a graduate of the Royal Central Gymnastic Institute. The whole school is divided into two parts, children from eight to fourteen and those from fourteen to twenty (or over). Each section, containing sometimes as many as two hundred children, has at least thirty minutes a day for gymnastic work, usually so that the little ones have their exercise immediately before noon-recess, and the others theirs just after the afternoon session. It requires a great deal of skill to handle such large classes in so short a time and yet supply the physical needs of each individual, without overtaxing his ability. But the teachers are able to do it, and that with the very best results.

It should be remembered that Sweden has schools for boys and schools for girls, and that the two sexes do not have instruction in common, except in the free schools and in the colleges. This makes it easier for the teacher of gymnastics, as boys and girls must, of necessity, have different exercises, especially after the age of twelve to sixteen, sex having a strong influence upon the progression of the exercises. The teacher of gymnastics in the boys' school is always a man, in the girls', usually, but not always, a woman. All the children are obliged to take the exercises, unless they suffer from deformity or organic disease, where gymnastics are contra-indicated. To decide who should and who should not exercise, a physician examines all the children at the beginning of the school-year, and gives a certificate of ill-health to those who are to be excused. He does not, however, measure every child and prescribe the exercises for the individual; for in the first place, measurements taken on growing children are no test of physical development, since a child changes shape and size almost from day to day; and in the second place, a physician is not competent to prescribe exercises, unless he is a teacher of gymnastics as well, which in Sweden means a graduate of the Royal Gymnastic Central Institute. All the children, as far as possible, are sent into the gymnasium and the teacher of gymnastics is responsible for results, without being interfered with by any one. He is not restricted as to the system of gymnastics he is to apply; he has entirely free hands as to means and methods, for he



is supposed to be a master of his profession ; he may use any form of exercise that he sees fit, and if the weather is pleasant, he may take the children out of doors for gymnastic games, instead of keeping them in the gymnasium. He groups his pupils, not according to age or grade in school, but according to gymnastic proficiency, and in that manner he is able to get the best results, keeping no one back who should advance, and advancing no one who should be kept back.

In the boys' schools, military drill forms part of the physical education, and for that reason in the early fall and late spring this form of exercise takes the place of gymnastics for the larger boys, whose previous training enables them to carry guns without injury to themselves. No special teacher is engaged for this, as the teacher of gymnastics usually is or has been an officer in the army. If he is not, he has acquired knowledge of drill while a pupil in the Central Institute.

When the boy graduates from the high-school, he either enters college or takes up some practical profession, and from that time, gymnastics are no longer compulsory for him. For the college student, exercise is provided in the college gymnasium ; for the business man, in the gymnastic associations to be found in all cities of any importance throughout the country. In the universities of Upsala and Lund, we find on the faculty a "fencing-master," whose duties are to furnish instruction in gymnastics and fencing to those students who wish to avail themselves of the privilege. But he gives no normal course as part of the college curriculum, so it should be understood that a Swedish college degree does not include gymnastics. In this country, it is a common error to suppose that every Swede must necessarily be competent to teach gymnastics, but unless he has the diploma of the Royal Gymnastic Central Institute, he occupies the same position as the physician without a degree.

The gymnastic clubs found in the various cities are usually composed of men of exceptional gymnastic skill, men who love gymnastics ; and they are taught by the very best instructors the country can produce. In the club gymnasia, like that of the "Stockholm Gymnastic and Fencing Club," where in 1884 I had the honor to be instructor, one finds that Swedish gymnastics cover a very broad surface, for here those exercising are confined no longer to the apparatus belonging to Swedish gymnastics proper, but the round horizontal bar, the dumbbells, Indian clubs, etc., are quite extensively used ; and an American might say, when looking at the exercises, that those were American gymnastics. The fact is, however, that Swedish gymnastics are a

system of movements, not of apparatus; and that any kind of paraphernalia is allowed in the Swedish system, provided it is used on the true gymnastic principles. That is, we use the movements in their proper progression, and thus can apply all of the *materia gymnastica* as we need it.

To provide teachers in Sweden there is a normal school of gymnastics, the Royal Gymnastic Central Institute in Stockholm, which school has been called by Dr. Hartwell "the finest of its kind in the world." Not long ago it was the only school of its kind existing, and it still remains the only one in Sweden, where it is possible to gain a certificate as teacher of gymnastics. This institute admits to its normal course a limited number of men and women, about twenty of each every year. To enter, one is required to present a high-school certificate or to pass an examination to prove the possession of an equivalent amount of knowledge. Men and women have all their lectures and exercises separate. The complete course for women is two years; that for men is divided into three sections: one year for instructors of gymnastics for the army; two years for teachers of gymnastics; and one year additional for those who wish to devote themselves to the practice of medical gymnastics; making three years for those who wish to obtain the complete diploma and the degree of the school. The degree given is "*Gymnastik-Direktor*" or Master of Gymnastics. More commonly, however, the graduate is called "*sjukgymnast*" or medical gymnast. The course includes the complete theory of gymnastics, anatomy (with dissection), physiology, hygiene, kinesiology, pathology and various minor branches as practical instruction in all branches of gymnastics. In order to provide material for those who wish to fit themselves to be teachers, the children from several schools use the gymnasium every day during the week, and the normal-pupils of the second year's course serve as teachers. This is one of the best features of the school; for the graduate then becomes not only a storage-battery of theory, but a teacher of practical experience as well. Each pupil has a number of children for whom he is responsible, and he takes his turn in handling the whole class of one hundred and fifty or more. The experience he thus gains enables him to take charge of the large classes he is expected to handle in the public schools. In the medico-gymnastic department, several hundred persons a day are treated by medical gymnastics; and during the third year's course, the medico-gymnastic students are obliged to assist in applying the movements to the sick, in order that they may gain experience before receiving their diplomas.

No one can apply for a position as teacher of gymnastics in the public schools of Sweden, unless he is a graduate of the institute, or at least has taken its two year's course ; and no one can receive a license from the board of health to practice medical gymnastics unless he holds the degree of the institute. Physicians are excepted from this last statute ; but as their degree does not include gymnastics, they must take the course of the institute if they wish to teach gymnastics. At the medical colleges in Upsala and Lund there is arranged an elementary course in medical gymnastics for medical students, but as the whole course only lasts about eight weeks the physicians who take up massage as a specialty go to the Central Institute. The elementary instruction just referred to is by no means a normal course of gymnastics, as it includes only the practical application of the medico-gymnastic movements, or the merely mechanical part of massage.

In the training schools of the army, there are elementary normal courses of gymnastics, so that the non-commissioned officers shall be able to give instruction under supervision of the regimental teacher, who must be a graduate of gymnastics.

To provide for the backwood-towns, where money is scarce and a graduate cannot be hired, the "seminaria" furnish elementary courses in gymnastics, enabling the teacher in the "folk-schools" to apply elementary gymnastics in an intelligent manner. Yet it should be understood that these teachers are not considered as teachers of gymnastics.

The Director of the Central Institute has for one of his duties to supervise the instruction in gymnastics of the whole country ; and for this purpose he travels from city to city, and appears upon the scene most unexpectedly. If the teacher in any place is found incompetent, he is discharged without further ado ; and if he wishes to continue as a teacher, he must take a post-graduate course before applying for another position. This supervision keeps the standard very high, as no one wishes to be disgraced by a discharge. It also causes uniformity of method, as the supervisor has it in his power to order any change he sees fit. The quality of work secured is exceedingly good.

As for the system taught, so much has been written about it, that I will simply call attention to the following points :

The exercises are chosen for their physiological effects, so that only such are used as are needed for a desired result ; all of doubtful or injurious effects are excluded. The development of the respiratory organs being of prime consideration, no movement is allowed to inter-

fere with free respiration, and the utmost care is taken that the exercises should produce a proper carriage of head and thorax. As the movements are practised for their effects on the body—not on an audience—we do not drill, drill, drill the pupils on a certain movement so as to teach them the “trick” of it, but take each one’s ability into consideration, even though we consider that the form of the movement is of utmost importance.

All the exercises are executed to words of command, as that is the only method by which the pupil is enabled to concentrate his whole attention upon one thing at a time, all other methods such as memorizing, imitation, the use of music, etc., causing him to think of one thing while doing another.

The progression is very strict, so that the exercises not only grow from lesson to lesson, and are made to conform to the differences of age, sex, strength, nationality, etc., but also so that there is progression in every day’s lesson. Practical investigation having proved that the exercises could be made stronger, their effects more complete and progressive, more rapid if a certain order were observed in every lesson, this order was made the basis for the classification of the exercises. Thus our movements are grouped as 1. Introductions, 2. Arch-flexion, 3. Heaving-movements, 4. Balance-movements, 5. Shoulder-blade-movements, 6. Abdominal exercises, 7. Lateral trunk-movements, 8. Slow leg-movements, 9. Jumping and vaulting and 10. Respiratory exercises, each lesson containing one or more from each group in the order enumerated.

The system is rational, for there is a scientific reason for everything that is adopted and used; and it is practical, for it is independent of apparatus. It can be applied anywhere and everywhere. The old-fashioned idea that a bath is a necessity after every lesson in gymnastics has been discarded, thanks to a proper use of respiratory exercises; for by providing a greater elimination of water through the lungs, the skin-evaporation does not increase to any marked degree; and no excess of perspiration occurring there can be no need of a bath to prevent taking cold.

The system is one of exercises and not of apparatus; nevertheless apparatus is desirable and hence a gymnasium is a much-needed addition to every school. For although good results can be attained by free exercises applied in the school-room, the best will never be secured until gymnasia are provided. This is not only because of the greater variety of movements that can be given in a gymnasium, but



also because a gymnasium necessarily calls for a special instructor, one who has made gymnastics his profession. Even if a gymnasium cannot be provided, a special teacher is desirable; for a teacher who teaches all branches cannot be expected to be an expert also in gymnastics, a science requiring a special training and a natural aptitude if the best results are to be obtained. It will also be found that the exercises will furnish more recreation, if a special teacher goes through the classes once a day and applies the movements, for the children often get tired of seeing the same teacher all through the day and do not give him the same attention as when they have had the relief of seeing some one else for a while. The exercises thus provide a change, not only physically but mentally.

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*NOTES.*

The November ACADEMY was devoted to the meeting of the New England Association of Colleges and Preparatory Schools, because the doings of that organization necessarily have an interest for secondary teachers everywhere. No other convention of teachers contains so large a proportion of eminent men, and from no other have fitting teachers a right to expect so much. That the papers and discussions were not all of equal merit or interest goes without saying, and that the total outcome was a little disappointing must be admitted.

As always on such occasions, the Greek question came pronouncedly to the front. One could hardly avoid the feeling that the modern language man had the best of the Grecians, both in the spirit manifested and in the arguments advanced. They seemed less inclined to mere affirmations and more eager to appeal to reason. Dogmatizing seems somehow a little antiquated in these days when each man claims for himself the right to weigh reasons and decide by his own thinking.

The final word on the subject was spoken by President Dwight of Yale University. "Greek should by no means be given up," said he. "There never was a man in the world who learned the Greek language who ever regretted it." This position is necessarily impregnable, for if a man says he thinks the time he spent on Greek would have been bet-

ter spent on something else, (and not a few Yale graduates say this very thing) it is easy to say he never learned the Greek language. In very truth not many men have learned it. President Dwight's statement is a telling affirmation, but after all is it a valid argument for introducing or retaining the study of Greek as an absolute requirement in our curricula? Might one not say with equal truth "There was never a man in the world who learned to play the violin who ever regretted it," and urge that the study of the violin be introduced into all our fitting schools and required by the colleges? As Mr. Welldon, Headmaster of Harrow, England, has recently shown in the *Contemporary Review*, it is not a question of what is good, but of what is best. It is a matter of choice, pure and simple. The boy cannot have everything; what then can he do without, with least loss. And Mr. Welldon is presumably not biased against Greek for he was himself a senior classic at Cambridge. Mr. Arthur Sidgwick three years ago expressed to us his disbelief in Greek for the average boy, and made it a point of criticism against the course of study in English schools that they pushed a boy with no linguistic aptitude along in Greek for a few years and left him without any appreciable acquirement, when the same time and energy would have given him a working knowledge of French that would have remained with him through life and stimulated him to other work. And Mr. Sidgwick is a Greek of the Greeks. In fact, we do not remember ever speaking with an eminent classical teacher in England who did not hold the same view. It is not the Philistines alone who do not believe that Greek is best for all.

President Dwight referred to his article in the *Forum* for last April, in which he set forth his views of what a youth of eighteen ought to have accomplished in the way of mental acquirement. So far as we have been able to learn, the article met with no general recognition either as a fair statement of possibilities for the average boy or as betraying intimate knowledge and appreciation of boys or teachers. In his remarks at the New England Association President Dwight repeated and emphasized what he had said before. To strengthen his position, he quoted Mr. Fox of New Haven, who, he said, had recently returned from a visit to the English schools and who "comes home to tell us that the American boy can, for the English boy does." We have talked with Mr. Fox since his return and while we found him bubbling over with enthusiasm, we did not learn that he was impressed with the idea that the English boy does so very much. We would commend to

President Dwight's attention the following from the Student's Handbook of the University of Oxford, which gives the entrance requirements for that venerable institution and beg him to remember that the average age at entrance in Oxford is considerably greater than that at Yale. For "persons who desire to be admitted to the University without becoming members of a College or Hall," "the subjects of the ordinary examination are :

"(1) Three Books of Homer, or one Greek Play, or an equivalent amount of some other Greek author.

(2) Three Books of Virgil's *Æneid*, or Three Books of the Odes of Horace, or an equivalent amount of some other Latin author.

(3) Translation from English into Latin.

(4) The elements of Greek and Latin Grammar.

(5) Arithmetic, including fractions, decimals, and proportion.

(6) Euclid Books I., II., or Algebra, the first four rules, fractions, and simple equations."

What New England College expects so little of its students at eighteen or at any other age? This is the entire requirement, no modern language, no science, history, belles lettres. Not even *both* elementary algebra and plane geometry; but the choice of either!

That it may not be thought admission to the University of Oxford is made specially easy for those who do not enter some College or Hall, we cite the following requirements for admission to various colleges :

Queen's College :

"(1) Greek and Latin Grammar.

(2) Translation from English into Latin Prose.

(3) Greek Books:—the *Hecuba* and *Alcestis* of Euripides. Latin Books:—Virgil, *Æneid*, I.–V., or some equivalent Latin and Greek Books. *The easiest to offer are four books of Cæsar and four books of Xenophon.\**

(4) Arithmetic; and Euclid, Books I., II., or Algebra, as far as simple equations, inclusive."

Worcester College :

"(1) The *Hecuba* and *Alcestis* of Euripides.

(2) Cicero, *de Amicitia* and *de Senectute*.

(3) Latin and Greek Grammar. Other books may, with the consent of the college, be substituted for those which are here mentioned.

(4) Translation from English into Latin Prose.

(5) Arithmetic.

(6) Euclid, Books I., II., or Algebra to the end of simple equations."

\* The italics are ours but the requirements are otherwise quoted exactly from the official handbook.

Hertford College :

- "(1) Euripides, Hecuba and Alcestis.
- (2) Virgil, Georgics.
- (3) Latin Prose Composition.
- (4) Latin and Greek Grammar.
- (5) Arithmetic.
- (6) Euclid, Books I., II."

Balliol College presents the most difficult requirement at Oxford. We give it entire. Those already given are fair examples of the average requirement.

"(1) Divinity including the Gospels in Greek.

(2) In Greek, a written translation from either Thucydides or Demosthenes, at the option of the candidate and a *viva voce* translation from Homer. In Latin, a written translation from either Cicero or Livy, at the option of the candidate, and a *viva voce* translation from Virgil. No portions of any of these books are fixed beforehand.

(3) Translation from English into Latin Prose.

(4) Questions in Greek and Latin Grammar, *viva voce*.

(5) English Composition.

(6) Euclid, Books I., II., or the first part of Algebra.

(7) Arithmetic, as far as decimals, inclusive."

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Secretary Dewey has sent us a circular in which he invites any person interested in the Regents' Annual Reports to send him any suggestions for improvements. This circular is not pleasant reading for an outsider who wishes to see a professional spirit among teachers and feels that all should be willing to contribute to what is of common interest. It must, however, be a rare treat to the many who oppose and decry the public school system when it extends beyond primary work. It furnishes another argument for those who claim that teachers have an easy time and do not earn their money. When the head of a school thinks it a great hardship to answer a few questions about matters with which he ought to be perfectly familiar, it is fair to presume that he looks upon work as an irksome thing, and is in the habit of receiving good pay for doing very little of it.

The regents' annual report has been in the past the best compilation of statistics in secondary or higher education issued in this country. It is based upon sworn affidavits of principals who ought to be intelligent enough to answer questions, and conscientious enough to tell the truth when under oath. But no one can study the report without arriving at the conclusion that some principals are either entirely unfamiliar with



what should be their work, or criminally careless of facts even when under oath. Some teachers take high ground: it is their business to teach, not to answer petty questions: they have to do with forming the minds of youth, not making up tables of statistics; they are educators, not accountants; and the inference is that they are concerned with spiritual rather than material surroundings. Still we do not see how it interferes with one's efficiency as a teacher even in the highest spiritual phase of his work for him to know the cost of his buildings, the names of his text-books, or even the number of weeks and days in the school year.

The work of making out the annual report and schedule is considerable. Of this we can speak from experience; but any capable teacher can lighten it greatly by so arranging his records that the needed items shall readily appear upon them. The report proper is then a slight task. The schedule, however, especially in large schools, takes time. Still two things must be remembered: (1) The laborious itemizing of all those studies is rendered necessary by the fact that without it the money would not be fairly apportioned—for cases have been found of teachers swearing to false returns; (2) Every name added to the schedule brings several dollars of additional income to the school. We know of few schools that would not willingly increase their list of names.

Secretary Dewey declares that he has no pet theory to carry out, but simply wishes the Regents to require from the schools only what will repay the labor and expense of collecting and publishing. In this he seems to us to deserve the heartiest coöperation of all New York teachers. An actual accurate Report of the Secondary Schools of a whole state, the first and only such report in the whole country, is a thing in which every principal of the state should take profound interest, and one in which he may rightly feel a proper pride. But to this report each one must contribute his due share or the work will not be perfect. It not unfrequently happens that when a man dies his affairs are found to be in inextricable confusion, no accounts, no books, no receipts, and as a result, there is great annoyance and embarrassment to those who survive. But it is a common occurrence for a principal on entering a new school to find no adequate record even of the previous year, while a complete record of a school's history and work preserved in the archives of the institution is rare indeed. All good business men keep some system of books which give them accurate knowledge of the condition of affairs at any time in the past. All

heads of schools should do the same. It may cost the business man half his net income to keep his records, but he knows it is an absolute necessity to the highest success. It may cost the principal hours that he would rather give to recreation or reading, but it is one of the duties of position, and should be accepted as resolutely as any other.

Every year, as education is studied more and more and as teachers strive for improvement in organization and in results, statistics of schools increase in importance. They are practical things. The teacher who wants his salary raised finds it worth while to be able to show his trustees from accurate reports that salaries in like positions are, as a rule, much higher than his. The principal who wants to save some favorite study which some ignorant outburst in the community endangers, finds it helps him to be able to show that in other schools that study has an honored place. The community that seeks better school accommodation against the opposition of wealthy taxpayers and subservient politicians, may find a powerful argument in accepted statistics from other communities regarding buildings, libraries, cost of maintenance, laboratories, collections, and all the material equipments of a school. All teachers like to know where they can get such information and be sure that it is trustworthy, but all teachers do not like to contribute their share and make it trustworthy, just as everyone likes to have his own letters answered, but perhaps is not very particular about answering the letters of others unless he conceives it to be for his direct interest to do so. If the Regents are asking what is unreasonable, that fact should be made very plain to their representatives at the coming Holiday Conference, where the subject will come up for discussion.

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Teachers of Latin who share the desire, recently expressed in THE ACADEMY, to find new Latin texts, treating modern subjects in animated and correct language, should endeavor to make the acquaintance of *Alaudae*, a journal published in Latin at Aquila, in the Abruzzi, Italy. The editor of this Latin paper is Carlo Arrigo Ulrichs, a German, long resident in Italy, and already well known both as an original writer and as the compiler of a Latin anthology. No copy of *Alaudae* has come under our own observation; but from a notice in Dr. Weiske's *Zeitung für das höhere Unterrichtswesen* we get the assurance that it is a journal richly deserving the attention of all lovers of modern Latinity. *Alaudae* discusses contemporary themes in the ancient language with astonishing skill. It undertakes to report upon modern inventions and to treat, in their full range, the ideas that interest the world of to-day. It even

publishes novels in Latin: the title of one such we find given as "*Titi Imperatoris Libertus*."

Especially interesting must be the *correspondence* which comes to this curious paper from all quarters of the world. Herr Ulrichs assures his readers that his journal is read by Pope, cardinals, bishops and by clergy of both the eastern and the western churches. We know not how a scholar can so easily become one of a company of grand distinction as by joining the society of subscribers to *Alaudae*.

As a specimen of the metrical work which Herr Ulrichs gives his readers, we subjoin his translation into Latin Sapphics of Goethe's well-known "*Ueber Allen Gipfeln*:" and to facilitate comparison, we add the German original entire:—

Über allen Gipfeln  
Ist Ruh,  
In allen Wipfeln  
Spürest du  
Kaum einen Hauch;  
Die Vögelein schweigen im Walde.  
Warte nur, balde  
Ruhest du auch.

PAX.

Est quies ramis foliisque cunctis  
Et silet lucus. Teneras volucres  
Nox tegit somno sonitusque nullus  
Surgit ad aures.  
Quid tibi pectus tremit inquietum?  
Pax erit quondam sua cuique. Somnus  
Et tibi tandem veniet brevique  
Ipse quiesces.

We have received and read with interest Superintendent Draper's address at Saratoga last summer. At that time we heard it criticised as too boastful in tone, but those most familiar with the condition of education in New York know that the state pride there is not without foundation. It checks somewhat, however, the ardor of one's belief in Mr. Draper's statements to find him claiming that the first female college in the country was that established at Elmira. The Wesleyan Female College at Macon, Georgia, antedates Elmira by nearly twenty years, and we can think of at least a score of others that came into existence before that at Elmira.

In this connection we are reminded of a statement made at St. Paul last summer by New York's representative that "Five years ago our

Regents' examinations, the one superior feature of our system, extended only to the common branches." The Regents' higher examinations were established in the school year 1877-8, and have been held without interruption, three times a year, since that time.

We have received from Professor Clarke, of Williamstown, the following circular which is to be sent to all the Colleges of the United States. Secondary teachers everywhere will be interested to know of the movement and most of them will be glad to give it a cordial support:—

TO THE FACULTY OF.....

In behalf of the American Society of Naturalists, we respectfully petition your honorable body to take into consideration the question of making such a change in your requirements for admission as to include therein some work in Natural or Physical Science.

In presenting this petition, it is appropriate for us to give briefly the reasons which have led the Society to this action.

The Society of Naturalists is a body of investigators and teachers of Natural Science. The majority of its members are professors of Biology or Geology in Colleges or other higher institutions of the north-eastern United States. Its meetings have been mainly occupied with discussions as to the methods of carrying on the various branches of scientific work in which its members are engaged. The discussion of education in science has accordingly occupied much of its attention.

In the consideration of scientific instruction in College, with a view to its improvement in method and result, the conclusion has forced itself upon our minds, that the main cause of the unsatisfactory results of scientific instruction in College is to be found in the lack of suitable elementary scientific training on the part of the students.

While a liberal allowance of time is devoted to scientific studies in most of the College courses, and in the English course in Academies and High Schools, there is generally little or no time allotted to science in the Classical courses in Academies and High Schools, and in the schools of lower grades. Most of the students in the Colleges have therefore received no training or instruction in the sciences before reaching those studies in the College course. By so many years of exclusive attention to other subjects, their powers of observation and of imagination of physical phenomena are well-nigh atrophied; and the loving interest in nature, innate in every normal child, instead of being systematically developed, is well-nigh extinguished.

The remedy for this state of things is to be found in the introduction of elementary lessons in science at a much earlier period of the course. We believe that the study of nature should begin in the Primary School, and



should continue, in increasingly systematic and philosophical methods, through all grades of the educational system. We believe that, in the light of sound principles of pedagogics, a system of education must be pronounced radically defective, which fails to gratify and to stimulate the curiosity of children in regard to the things about them and within them, confining them to more abstract studies, some of which are better suited to maturer minds.

So far as the reform which we advocate relates to schools below the grade of the High School or Academy, we can ask from you only sympathy and moral support. But one most important step of progress is absolutely dependent upon the action of College Faculties and Corporations. The better class of High Schools and Academies are prepared to furnish instruction of very respectable quality in various departments of science; and actually do furnish such instruction to those of their students who are not preparing for College. They are ready to furnish such instruction to those students who are preparing for College, just as soon as it can find recognition in the Colleges as a part of the preparatory course.

Hence we are led to make an earnest appeal to the Faculties of the Colleges to make some work in Science form a part of the requirements for admission, being assured that in so doing they will be taking a most important step in the direction of a symmetrical and philosophical arrangement of the educational course.

The question of the particular sciences which should be required for admission is a comparatively unimportant one. In the report adopted at the meeting of the Society in 1888 (a copy of which is forwarded herewith), the Committee recommended the selection of *Phænogamic Botany*, *Human Physiology*, and *Physical Geography*; the first, as furnishing most conveniently a thorough observational discipline; the second, as affording information of great utility; the third, as tending to keep alive a general sympathy with nature. It was moreover believed that the High Schools and Academies in general are prepared to teach these, at least as well as any other, science studies. There is, however, room for difference of opinion on the question whether other sciences, as *Physics*, *Chemistry*, and *Zoology*, may not have equal or even superior claims; and it is not unlikely that some preparatory schools are able to afford better instruction in some other sciences than in those recommended in the report. It would probably be best for the present, especially in view of the great inequality in the resources of different preparatory schools, to allow some degree of option to the candidate in regard to the particular science or sciences in which he should be examined. The point which we consider essential is that some study of nature should be required before admission to College.

If it is deemed impracticable to make the proposed change in the requirements immediately, we would earnestly request that the principle be recognized by the insertion in the next Catalogue of a notice that some work in

Natural Science will be required for admission after the year 1892 (or some other date that may seem convenient).

We send you herewith the reports of the Committee on Science Teaching in the Schools, which have been unanimously adopted at the last two Annual Meetings of the Society, and an address of the President at the last Annual Meeting bearing upon the same subject. These documents will serve to set forth somewhat more fully the views of the Society, and will also give some history of the efforts which the Committee has made to call attention to these views, and of the favor with which they have been regarded by prominent Educational Associations.

In addition to the endorsements of our views on the part of prominent Educational Associations, quoted in our second report, we will call attention to the following resolution, unanimously adopted by the Association of Officers of Colleges in New England, and its meeting in Middletown, Connecticut, Nov. 7, 1890.

At this meeting there were present ten presidents of New England Colleges.

"The Association of Officers of Colleges in New England desires to support the endeavor of the American Society of Naturalists to introduce instruction in Natural Science into Schools; and the Association agrees with the Society in thinking it indispensable that the methods of instruction should invariably be demonstrative."

SAMUEL F. CLARKE, Williams College.

WILLIAM G. FARLOW, Harvard University.

GEORGE L. GOODALE, Harvard University.

GEORGE MACLOSKIE, College of New Jersey.

WILLIAM NORTH RICE, Wesleyan University.

HENRY FAIRFIELD OSBORN, College of New Jersey.

WILLIAM T. SEDGWICK, Mass. Institute of Technology.

SIDNEY I. SMITH, Yale University.

C. O. WHITMAN, Clark University.

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### BOOKS RECEIVED.

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*Civil Government in the United States* considered with some reference to its origin, by John Fiske. Houghton, Mifflin & Co., 1890.

Mr. Fiske had already given hints that he knew something of the essential principles of pedagogy. By his latest publication, however, he has proved himself an adept in these principles. He understands history and government,—but this we knew before. He also understands the fundamentals of educational method, and is competent to teach teachers in their own art. His book on Civil Government is to

our mind chiefly significant as a reinforcement of good doctrine applicable to all studies. In this way the other subjects also should be taught.

The method which Mr. Fiske commends, and to which he adjusts his book, he names, and very reasonably, the Seminary Method. Should any teacher be in doubt as to the meaning of the term "Seminary" as applied to a method of teaching, we can think of no better source of information in the matter than Mr. Fiske's preface; nor could we imagine a better illustration of the seminary method than the book itself with its abounding suggestions and its pointings of the way.

The text-book method gives the pupil a text to learn. The seminary method gives him something to find out and guides him into the fruitful fields that will reward his seeking. What in the laboratories and universities is called research, is still research in the secondary schools. The elation of the seeker and the discoverer is a motive as strong and as available within the range of pedagogy as it is in scientific investigation. The pure type of the text-book method is seen in the current geometries, where the pupil has nothing to seek, but only something to learn and remember, and where he is supposed to learn to reason by committing reasonings to memory. In history the text-book method assigns certain pages to the learned and recited; the seminary method asks questions and proposes topics which imply research in several books or chapters. The seminary method in history is in full career in certain high school classes. The text-book method is, however, still dominant. Indolence, inertia, lack of resolution to take the initiative, are its best friends and supporters.

As its title implies, Mr. Fiske's book treats the several divisions of its subject with reference to their origin and development. An institution that has grown to be what it is, cannot be considered in any other way; its growth is the all-important fact in it. A manual for town officers might suffice to enable its users to perform their routine duties without going into the history of town government. But this would demand no intellectual exertion, and would not conduce to intelligent or patriotic citizenship. A process of education presupposes curiosity and desire for knowledge in the learner. The true educator takes it upon himself to stimulate this curiosity. He will bring it to pass that the pupil shall ask, what came before the town, and how did our ancestors happen to organize their town as they did. The really interested learner will go back in imagination to the time when there was no town in the county, and will easily be led to announce, as if by a dis-

covery that he makes himself, that the men who planned the town must have acted from mental habits already fixed and must have reproduced forms with which they were already familiar. The fathers were as much under the dominion of custom as we are, and we are wholly under this dominion, as young folks can easily perceive. The historical curiosity which notices so large a portion of modern intellectual activity is no less serviceable as a spur in the schoolroom, and the historical imagination by which we see in our ancestors men of the same limitations as ourselves, and not beings of miraculous wisdom, is a faculty whose elements at least can be awakened in youth.

Mr. Fiske begins with the township, and passes thence to the county, the city, the state and the nation. Another method is to begin with the national constitution because this is the supreme law. But Mr. Fiske's order is certainly the natural one from every educational point of view. The town government is the one most familiar, most domestic, to the learner. As the modern methods in geography suggest that the school-house and the yard be the starting-point for instruction, so in civil government the same considerations suggest the town and *taxes* as the centralmost point from which best to depart to reach the other departments of the subject. Moreover, the town preceded the nation in history. The nation presupposes the town. The learner's voyage is made more easily down the stream of time than against it. To begin with the consummate result of a long development is to attack difficulties *en masse*; to begin far back in the process of growth, and then to trace this growth step by step, is to grapple with the difficulties one by one.

We hardly know in what language to express our sense of the charm of Mr. Fiske's style. Here is actually a *text-book*, and that a text-book of *civil government*, whose style is fascinating! English teachers may well petition for its introduction as a superb model of all that composition should be. Mr. Fiske knows his subject so well that he is able to move through its intricacies with a lightness and freedom that are in most astonishing contrast to the heavily serious and dignified manner of many text-books of such grave themes. He has made a book that can be read with sustained interest in the family, and which should be read by every citizen whom a common-school education qualifies to understand clear exposition in simple language.

As a guide and stimulus to study and research, the book is made more valuable by the abundant questions which have been added to the several sections by Mr. Hill, of Cambridge. Mr. Hill is a skillful



teacher to begin with, and he has entered into the spirit of Mr. Fiske's method with what seems perfect sympathy. We welcome, especially as coming from the head-master of a Cambridge high-school, a piece of doctrine so wholly sound as this from Mr. Hill: "Do not permit anything like committing the text to memory." In Mr. Fiske's chapters with their appendages of questions we see a work of genius bearing a first-rate pedagogic endorsement.

*An Easy Method for Beginners in Latin.* By Albert Harkness, Ph.D., LL. D., Professor in Brown University. New York: Cincinnati: Chicago: American Book Company.

Of the seven books for beginners in Latin which have appeared under Professor Harkness's name, this impresses us as by all odds the best. It is not difficult, and it departs widely from the method he has heretofore employed. Whether the new departure arises from a change in the author's views or from his having had a practical teacher of young pupils to assist him in the work does not appear, but we congratulate those who are to use the book upon the fact.

The feature of the book which will attract most attention from a casual observer is the lavish use of pictorial illustrations. These are uniformly good and often, though not always, can be recognized as having a pedagogic value. We think it would have been better to omit those that have no direct bearing on the pupil's work during the first year. There is not the same reason for pictures in a book for a boy of twelve that there is in one for a child of six, and it is not possible to bring the whole range of school work within the sunny circle of picture books. Opinions will differ as to the value of these illustrations. Our own preference would have excluded a considerable number of them, but if they serve to increase the interest of the pupils in the study they have a sufficient vindication.

Another noticeable feature in the book is what seems to us the excessive use of foot notes. They often contain matter which most good teachers would prefer to give with the living voice and which will best impress the pupil when so given. Indeed the most serious adverse criticism which we should pass upon a book that appears to us on the whole excellent, is that it too often usurps the function of the teacher. We are aware that in saying this we are criticising what will win the book many friends among certain classes of teachers. We nevertheless consider it a grave pedagogic fault. The author's wide experience has perhaps made him distrustful of the knowledge and methods of teachers of Latin, not without reason we fear. He must, however,

have noted a considerable improvement in the last dozen years, and therefore we wonder the more at his having so often in this latest book anticipated the teacher's office.

The first lesson takes up the simple sentences, with subject, verb, and object, all in the singular number. The second lesson adds the plural of all three. In the third lesson is introduced the first declension in both singular and plural, and in the fourth, the genitive of possession. Then follow in separate lessons, apposition, certain passive forms, the second declension (three lessons), predicate nominatives, and in the tenth lesson appears the first *Colloquium*. Another *Colloquium* is given in the fifteenth lesson, a story about an idle boy in the eighteenth, and from this point onward the reading exercises are frequent and excellent. This getting a pupil into reading connected Latin in little more than a month, and from that time presenting him with fresh matter suited to his vocabulary seems to us one of the best features of the book. Scarcely a hundred Latin words need be learned before the pupil gets his to the first *Colloquium*.

The vocabularies in each lesson seem to have been arranged with special care. They are short and contain few uncommon words, thus helping the student to a thorough and easy mastery of meanings that he needs to learn, and saving him from loading his memory with what will be of use to him, if at all, only after a long interval.

The Subjunctive is quite fully treated under the heads of Desire and Command, Potential, Purpose, Result, Conditional Clauses with *si* etc., and with *dum, modo, ne*, etc., Causal Clauses, Temporal Clauses, Indirect Questions and Indirect Discourse.

There is a considerable body of reading matter in Latin at the end of the lessons proper, and this is followed by tables of verbs, regular and irregular, Rules of Syntax, Latin English and English Latin vocabularies.

The book is substantially gotten up, well printed on good paper, and like most of the books issued by the same house, the binding it as good as skill and pains can make it. But the good is not always the beautiful.

*Easy Latin Lessons.* By Thomas B. Lindsay and George W. Rollins. Boston : Allyn & Bacon, 1890.

In several important particulars this work differs from the usual Latin lessons and justifies its title. In the first place, the authors have rigorously excluded all but the most important principles of syntax, and

the forms are approached so gradually that at no time in his course will the faithful student be likely to be embarrassed by a multiplicity of detail. Thus in the first lesson the singular of *hasta* is given to be learned, and the plural is reserved for the second lesson. To the second declension four lessons are given. Of the 116 lessons which the book contains, very few, if any, will need to be divided. The special vocabularies are short and are made up of the most serviceable words only.

From the first lesson, sentences are set for translation. Nowhere in the exercises are detached words or phrases given. As a whole the sentences are excellent. They gradually lead the pupil up to the same difficulties of idiom which he will meet later on in his Caesar, and the authors have avoided the not uncommon mistake of making sentence after sentence merely a variation of a common type, — a method which makes translation mechanical and deprives the sentences of their greatest value as exercises. No part of the work shows more pains taking labor than does this.

Commencing with lesson X., and occurring at intervals through the work, there are about twenty-five longer exercises. These vary in length from five lines to somewhat over a page. They are taken from various sources and seem well adapted to the purpose of accustoming the pupil to the reading of connected narrative.

A not unimportant feature of the book is the appendix, in which are collected the different paradigms which occur in the course of the lessons. This arrangement not only enables the authors to print with the several lessons only the forms which are to be learned in connection with each, but also presents the paradigms in a shape most convenient for review. In like manner, too, all the rules of syntax are collected at the end of the book. In the statement of these the authors have wisely forbore to make them too comprehensive, but have merely given in simple language the principles most needful for the beginner to know.

This self-restraint which is shown throughout the work justifies the statement in the preface that the book is not intended to supersede the teacher or to anticipate his work. This is a consideration which teachers who have been accustomed to seeing their functions usurped by the makers of text-books ought not to be slow to appreciate.

The printing seems to have been done with exceptional care, and almost no errors have been noted. In sentence 8, section 583, *custo-diretur* is incorrectly divided, and the same remark applies to *magnam*,

p. 46, and *pugnam*, p. 123, according to the rule laid down by the authors. On pages 214, 263, 346, and 371, apparently following Lewis and Short's Dictionary, the authors have marked the quantity of the last *e* in *repente* as long. This is an error of the dictionary, as may be seen by comparing the use of the word in Virgil, *Æneid*, Bk. II., xv. 380 and 465.

The distinction made in section 531 between the dative and ablative uses of the supine seems for a beginners' book a needless refinement and so not in harmony with the general plan of the work. Not a few teachers, too, will be sorry that the authors have thought best in the paradigms to attempt a translation of the subjunctive forms. Such a method does no good, and no habit in the pupil is more difficult to eradicate than that of a mechanical translation of every subjunctive by a *should* or *would*.

But these are all of them slight blemishes in a work of exceptional merit, and Messrs. Lindsay and Rollins appear to have attained a high degree of success in the attempt to lighten the labor of what is usually the most difficult year's work in Latin.

The book is printed in large, clear type, well spaced, so that the page has a beautifully clear and open look. Under ordinary circumstances it should seem that the book could be finished within thirty weeks, thus leaving some time for the use of a first reading-book, before the pupil has to grapple with the difficulties of Caesar.

F. H. HOWARD.

THE FRIENDS' SCHOOL, PROVIDENCE, R. I.

*Chronological Outlines of English Literature*, by Frederick Ryland, M. A. London and New York; Macmillan & Co.

Teachers of English will not fail to find this book of service. Its purpose is to give in tabular form an outline of the annals of English literature. It is, however, not a chart, but a handsome book of 351 pages. In the two parts into which it is divided it resembles the two volumes published many years ago by Bohn, under the editorship of J. Willoughby Rosse, to render a similar service to general history, and respectively entitled "Chronological Tables" and "Index of Dates."

Part I. of Mr. Ryland's book is so arranged as to give in connection with each year, from 1500 onward, the chief literary events of that year. First are given, opposite each date, the works published that year in English; then, in following columns, biographical dates, publications in foreign literature, events in political history, with a final column for



occasional annotations. Before 1000 the dates are given, quite naturally, at long intervals, — from 600 to 1100 by centuries, thence to 1300 by half-centuries, and thence to 1500 by quarter-centuries.

This arrangement enables the student to see at a glance what were the literary phenomena in England and other countries, at first for any century, and at last for any year.

Mr. Ryland's part II., on the other hand, consists of an alphabetical list of authors, each author's name being followed by a list of his publications with their dates.

The utility of the book is manifest. It will naturally become the *vade mecum* of the teacher at every session of the class in literature. For, with the book at hand, it is possible to see at a glance what was done in English literature in any year, or what was done, at any time in his life, by any writer. We know of no book, so small and manageable, that does so much.

We have not examined the book critically to find errors, but we could not help wondering at the life assigned in both parts to Edward Young, — from 1681 to 1795, — a life of 114 years: and it is interesting to see, under the year 1564, a mention of the birth of Marlowe, but no mention at all of Shakespeare.

*A Stem Dictionary of the English Language*, for Use in Elementary Schools. John Kennedy, author of "What Words Say." New York and Chicago: A. S. Barnes & Company.

Mr. Kennedy is an enthusiast on the study of words. But in the preface to this book he lets us know that he looks beyond the mere study of words. "Language is not only the means of expressing thought, but it is also the necessary means or condition of extensive thinking. It is, therefore, an immediate and ever-pressing factor in education; it is the available form of another's thought; it is the means of developing and perfecting our own." Here is stated in succinct form the reason and justification for the prominence given to language study in any worthy scheme of education. Unless the statements just quoted cease to be true, language will rightly continue to be "an intermediate and ever-pressing factor in education."

The reasoning by which the author justifies the introduction of many and varied quotations from the best writers of English, is both true and suggestive. "Vile reading and vile companionship cannot be argued away; but they both can be made loathsome by the creation of a taste for better things."

*First Greek Grammar.* By W. Gunion Rutherford, M. A., LL. D., Headmaster of Westminster. London and New York: Macmillan & Co. 1890.

Part First, Accidence, 185 pages, and Part Second, Syntax, 170 pages, have been bound together in one volume, and Indexes, both Greek and English, have been added. The first thought which comes to one on opening a book like this is that American book-makers have yet much to learn from the English in regard to the material part of their work. No such typography, paper or binding as this is to be seen in any American-made book. It is not a pleasant thing to have to confess that we are still, as we always have been, so far behind the English in the mechanical part of book-making.

For the rest of the book, too, we can offer only praise. It is brief, clear, attractive, not loaded with unnecessary matter, giving common forms of common words and the usual modes of expression only. Exceptions and the great mass of detail which usually fill our grammars, to the embarrassment of teacher and the discouragement of pupil, very properly find no place here. It is intended for pupils younger than ours usually are when they begin the study of Greek, but we think older pupils could use it with great profit.

*Our Dictionaries and other English Language Topics.* By R. O. Williams. New York: Henry Holt and Company. 1890.

Forty-four pages of this book are devoted to the "Growth of our Dictionaries," and make interesting and pleasant reading, although the treatment is not thorough enough to be of any great value. The rest of the book is made up of short papers calling attention to various uses of words often condemned, as the author thinks, without due reason. The longest paper is on "Good English for Americans." The positions taken are defended by numerous citations, and the author gives evidence of acquaintance with good English, but the book makes no great addition to what has already been written.

*History of Egypt.* By F. C. H. Wendel, A. M., Ph. D. New York: D. Appleton & Co. History Primers.

Nowhere have we seen so good an account of the subject in brief as in this little book. Necessarily the condensation of so much matter into so small a space detracts at times from the interest of the story, but interest, nevertheless, is preserved to a remarkable degree.

Egyptian history is little known even by intelligent people, and this primer gives a clear epitome of it in a space so narrow that even the busiest may find time to explore it.

*Health for Little Folks.* Authorized Physiology Series No. I. New York: Cincinnati: Chicago: American Book Company.

This is a book designed for young pupils in primary schools. The language is simple and, except the chapter on "Drinks that Contain Alcohol," the book seems well adapted to its purpose. As for the chapter referred to, we do not think it teaches the truth and therefore believe it unwise to introduce it into any book, primary or advanced.

*Our Choir.* By the Sexton: Author of the Forthcoming and Voluminous Work Entitled "The Conflict between the Man in Wall pew and the North window, as witnessed by the Conqueror of the one and the (at last) Controller of the other." Assisted by Geo. A. Stockwell. Providence, R. I.: William J. Danielson.

As its title implies, this book is not strictly educational, nor does it bear directly upon the teacher's work, secondary, primary or university. But it is pleasantly written, and will be found amusing by many teachers, who will at once recognize the types it portrays.

*A Pocket Handbook of Biography* containing more than Ten Thousand Names of Celebrities in every sphere of Human Action, showing their Nationality, Rank or Condition, Profession or Occupation, the Dates of their Birth and Death, and effectually answering the frequent query, "Who is he?" Compiled by Henry Frederic Reddall. Syracuse, N. Y.: C. W. Bardeen, Publisher. 1890.

*Political History since 1815* (excluding the United States). A Syllabus of Lectures prepared for use in the Massachusetts Institute of Technology. By Charles H. Levermore, Ph. D., Assistant Professor of History, and Davis R. Dewey, Ph. D., Assistant Professor of Political Economy and Statistics. Boston: W. J. Schofield, Printer, 105 Summer street. 1889.

*Practical Lessons in German Composition.* A companion to all German Grammars. By A. L. Meissner, M. A., Ph. D., D. Lit., Librarian and Professor of Modern Languages in Queen's College, Belfast. Boston: D. C. Heath & Co., Publishers. 1889.

A course of lectures on the Growth and Means of Training the Mental Faculty, delivered in the University of Cambridge, by Francis Warner, M. D., Lond., F. R. C. P., F. R. C. S. Eng. Cambridge at the University Press. New York: Macmillan & Co. 1890.

*Home Exercise.* For Health and Cure. With 45 Illustrations. Translated from the German of D. G. R. Schreber, M. D., (23d Edition) by Charles Russell Bardeen. Syracuse, N. Y.: C. W. Bardeen, Publisher. 1890.

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#### *SIXTH HOLIDAY CONFERENCE.*

The sixth holiday conference of the Associated Academic Principals of the State of New York will be held at Syracuse, Tuesday and Wednesday, December 30, 31, 1890. A large attendance is expected. It

is important that every principal of our secondary schools and every friend of education entitled to membership, be present, if possible. All such are earnestly requested to attend and participate in the discussions. Come prepared to speak on one or more of the topics found in this circular.

While the conference is of secondary teachers and is solely in the interest of high schools and academies, colleges are invited to send representatives who may be invited to take part in the discussions, and who are eligible to regular membership if they have been principals of secondary schools five years or more. Principals of normal schools in which academic branches are taught are also eligible to membership.

Below will be found a list of topics which will be discussed as far as time will permit. A question box will be placed upon the president's desk during the session into which members may put questions, not in the list, which they desire to have discussed.

- 1 Proposed changes in regents' examinations as indicated by the December edition of the "Proof under Revision."
- 2 Books which have helped me as a teacher.
- 3 Is an increase in the special topics in literature desirable?
- 4 Is a new basis for the distribution of the literature fund desirable?
- 5 Methods of teaching English composition.
- 6 Methods of teaching physics.
- 7 Should all public schools in the University have the uniform name of academy or high school?
- 8 Training classes in academies.
- 9 Necessity of school statistics.
- 10 Where and how can time be saved in the lower schools?
- 11 The respective functions and relations of the holiday conference and University convocation.
- 12 Professional courtesy among teachers.

The Executive committee will be in session Monday evening, December 29, at the conference headquarters in the Globe hotel. The public sessions will begin Tuesday morning at ten o'clock, at the Syracuse High School.

The Trunk line passenger committee have agreed to sell return tickets from Syracuse at one-third price to all who present the regular certificate of having paid full fare in coming.

*To guard against disappointment make sure that your ticket agent has the blank "Trunk line certificate" ready for use, and either get one the day before or else allow ample time for filling out the blank which cannot be issued at the last moment like an ordinary ticket.*

Board at the Globe Hotel will be \$2.00 a day for members of the Association.

FRANCIS J. CHENEY, *President.*

ELIOT R. PAYSON, *Secretary.*



# THE ACADEMY:

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A JOURNAL OF SECONDARY EDUCATION

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DEVOTED TO THE INTEREST OF HIGH SCHOOLS ACADEMIES AND  
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## *SUGGESTIONS OF ENGLISH STUDY FOR TEACHERS OF ENGLISH.*

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S. THURBER, BOSTON.

"THE first need of teachers, even in lower grades," says Pres. G. Stanley Hall, "is a better knowledge of the subjects taught. Teaching is in no sense professional till teachers not only are far beyond the need of keys and translations, far ahead of their best pupils, but can command the choicest resources of their subject. Even reading, school mathematics, history, geography, language and writing are far more effectively taught by teachers who have been tempered for their work by the glow that comes from growing insight into some chosen mental field, and who know what devotion to truth for its own sake means; who have developed some interest in their subject and enthusiasm for it. Such teachers will be 'lovers,' as Plato said, 'not of truth alone, but of children and youth, whom they will burn to impregnate with it.' They will really believe in education, and will bring out its power."

In the spirit of fullest sympathy with these words of Doctor Hall, and believing that teachers and supervisors of English, more than most others, need to take them to heart, the writer submits his suggestions to his fellow English teachers, in the hope that he may aid, *pro virili parte*, in the formation of a higher standard of professional attainment. English teaching is not respected as it ought

to be; the reason is that the teachers are not qualified to make it respected.

We English teachers are perhaps not quite to blame if the rising tide of interest in the scientific study of our language and literature caught us unprepared. How should we have been prepared? What schools or colleges were there to teach us English in those plastic years of our youth when we submitted to direction and formed our ideas of what constituted a liberal education? Not so very many years ago a student could graduate at an ancient university without once having been even asked, much less required, to read a play of Shakespeare or a tale of Chaucer; without meeting once an instructor competent to teach old English. At this ancient seat of learning the learner heard grave eulogies of the course of study as a thing almost canonical, embodying all the wisdom of ages. President Eliot has told us now and then how sad and depressing he has found his reading of the history of pedagogy. To me no part of this history is more sad than that which befell my own experience as a youth at college, receiving what I was assured was a well-rounded training in the humanities.

But a new day has dawned for us at last, and we may well afford to forget the dark past in this refulgent present. The subject which in all the culture nations is profiting the most by the deposition of classical studies from their traditional supremacy in education is the native language and literature. The English-speaking peoples are at this moment in the flush of a veritable Elizabethan renaissance of racial self-consciousness and self-respect. It is an era of change, of elation, of hope, of resolute endeavor. The colleges are founding new chairs of English, and are calling to these chairs young men of special training, zealous devotees of studies unknown to the schools of a generation, nay, of ten years ago. If you read the college news, you know that every ambitious institution must now have a professor competent to offer courses in Old and Middle English and in Teutonic philology. The present generation of students enjoys lavish opportunities of English study, where ours enjoyed none.

The question for us, therefore, is,—what can we, whose academic years are gone, still do to make good to ourselves our lack of early opportunity? We who, with our school devices, stimulate and urge the young to intellectual effort,—can we, from the promptings of our inner desires, push ourselves onward through solitary

and exacting studies? Must we wait for the long vacation and then attend a summer school? Are our ambitions of that order that we always need a pedagogue to assign us a lesson when we are about to study? Everybody can do what he seriously desires to do; and everybody can find in the plea of lack of time excuses for not doing that for which his desires are but half desires.

Sometimes we hear high school teachers express sentiments of dislike for the *philological* study of English. In such utterances I seem to hear an apology for no study, an announcement of complacent acceptance of one's own attainment. Frown on philological study of our language and literature, and what remaining field of work do you contemplate as worthy to have your regard and devotion? Most secondary teachers are college graduates. Such surely have no excuse for a misconception of the meaning and scope of the term *philology*. Yet I believe that some such misconception is prevalent, and that it is doing harm to our teaching. I shall be misunderstood of course; but I will strive to make this calamity your fault and not mine. I do not mean to touch upon methods of English teaching. I do not mean to suggest that we should introduce far-sought matters into our class-rooms. Please remember my quotation from President Hall, and my title, which is *Suggestions of English Study for English Teachers*.

Now the notion that philology is related to some higher and more genial dealing with literature as a dry and rattling skeleton is to a living body clothed with grace and color, is very absurd. It has no content of truth. We do not deal with ourselves intellectually as we do with the children whom we teach. If our nature is not subdued to what it works in, like the dyer's hand, we, being adult men and women, are driven to inquire into causes, to trace processes of growth, to go as far back as possible towards the beginnings of things. Philology is simply science applied to language. Whoever investigates in any corner of the great field of language philologizes. Let us not be afraid of the word. It will now be well to look for a moment at some of the special topics which the term includes.

The first element in a scientific comprehension of language is the perception that it is a thing of growth and change, that it develops from century to century, and never reaches a fixed and final state. The English language has a history of vast extent, illustrated by monuments of the most interesting kind. A person studying

English merely as printed in the recent literature is sadly handicapped as compared with one who has traced its course from its origins through the vicissitudes of its long career. Everything in speech is at some stadium of a process of evolution. Everything is related to a past, and can be understood only as a product of antecedent conditions. To account for any phenomenon of organic life we must go back and search for the landmarks of the earlier stages of that life. Now to do this in English study is eminently feasible and pleasant. The way is broken for us. To follow the pioneers in this path is a labor that brings the most abundant rewards in better insight into the laws of our language, and in heightened respect and quickened love for the literature in which we have a birthright.

I do not hesitate to say that it seems to me the time is ripe for urging upon secondary teachers and supervisors of English that they seriously undertake the study of Anglo-Saxon and the later forms of the language. Recent years have furnished us the means for such study in lavish profusion. What teacher so engrossed with drudgery that he cannot master Henry Sweet's *Anglo-Saxon Primer*, a little book of fifty pages of grammar and fifty more of text, notes and vocabulary? Yet there is a little element of austerity and brevity about all that Sweet writes, and I suggest therefore, Hiram Corson's *Handbook of Anglo-Saxon and Early English*, a book containing much more matter and in its manner more attractive. The student of English in any of its ancient or modern phases soon finds that he must resort to the Germans for help, as they pursue English studies with greater zeal than the English. A book for beginners in Anglo-Saxon more abounding in help than any other I know, and presenting a translation opposite all the text,—a most proper feature in an elementary language-book,—is Karl Körner's *Einleitung*. In the second stage of his progress the student will of course resort to Sievers, an excellent translation of whose grammar by Professor Cook is published by Ginn & Co.

All expository notes to school texts now-a-days are apt to contain references to Anglo-Saxon forms and roots. Evidently there is a public demand for such references. These perpetual allusions to Anglo-Saxon originals imply a wide-spread curiosity about such things. They presuppose that we teachers of English are the curious people. But unless we have mastered so much of the language as is



included in its elementary grammar, these allusions leave us in the attitude of uninitiated outsiders, a ridiculous posture for teachers in the high schools of this proud country. With so much grammatical preparation as I have suggested it first becomes possible to use our English dictionaries intelligently and fruitfully. First, there is the new Bosworth-Toller dictionary of the Anglo-Saxon, now three-fourths completed, indispensable to all serious English study, full of the most interesting elucidations and fascinating even for continuous reading to the Anglo-Saxon initiate. This dictionary, like the other modern dictionaries of broad scope, is full of citations from the literature. The use of it is a constant education in Old English. Then there is the great dictionary of the English Philological Society, edited by Doctor Murray. I hope a good many of my readers have done themselves the honor to acquire this monumental book, so far as it has gone,—not yet, at this moment, through the letter C. No teacher can, without disloyalty, permit himself to speak of this work as if it were intended for some exclusive class of erudites in which he disclaims membership. It is intended for every reader of English who has caught the least spark of scientific zeal. To live where Murray's Dictionary is beyond reach would be a deprivation indeed to a genuine student. This dictionary of course deals largely with the Anglo-Saxon. It goes back, in fact, to the middle of the twelfth century for its vocabulary. Thus it serves the reader of Chaucer as well as the reader of Shakespeare and Longfellow. It professes to be based on historical principles, and is so based to the fullest extent imaginable. It links the present and the past of our language together as no other work does. Even the popular dictionaries, like the *Century* and the new *Webster*, which please the great public with pictures, also contemplate readers imbued with scientific curiosity, and boast that they are abreast with the philology of the day. Everyone who has studied Latin and Greek knows how much even a little acquaintance with these languages illumines the dictionary. Now an acquaintance with Anglo-Saxon illumines the dictionary quite as much as a knowledge of all other languages together, because from Anglo-Saxon we get vocabulary and inflections, and from other languages we get only vocabulary. Our speech is a modified Anglo-Saxon; not a modified Latin, like French or Italian. Modern English has developed by a continuous process of growth out of Old English. There is no boundary line between

them. There is no point in the past back to which we must go and beyond which we need not go. What are we to think of a theory of education which prescribes long study of Latin, which is the basis of French, and leaves optional the study of Anglo-Saxon, which is the basis of English? All the larger dictionaries now are dictionaries of etymology as much as is the professedly etymological dictionary of *Skeat*. Every teacher who is also a scholar will seek to find himself at home in his *Skeat*. But the articles in *Skeat*, and *Murray*, and *Webster* are sealed to him who has made no linguistic studies: very many of them are sealed to him who has made other linguistic studies, but has neglected his Anglo-Saxon. It is better to have worked ever so little in the origins themselves than to have read any number of the popularizing books which undertake to give us results while sparing us the labor of research. The notion that results can be communicated to passive readers and hearers so as to produce in the recipient minds intellectual states even remotely corresponding to those of the investigators is a delusion that underlies most errors in education. It is unthinkable that a scientist should announce a view of his own apart from his grounds for holding that view. His deliverance would make a good sensational item for the newspapers, but would lose him caste as a scientist. Children take things on faith, and the languidly reading public of the papers likes to be amused; but the student insists on knowing for himself and enjoys the *labor improbus* which conquers all things.

Works on the history of the language, some very elementary and some exhaustive in detail, are numerous enough. Doctor Murray's article on the English Language in the *Encyclopædia Britannica*, I may assume, is known to many of my readers. It is an altogether admirable compend. Much reading of such histories soon begets the conviction that nothing will suffice short of some direct acquaintance with the monuments of the language. But if one desires a guide to independent study, one will find such guide in the chapter on the history of the language in Elze's *English Philology*. Of this book, indispensable from every point of view to the student of English, I shall soon have occasion to say more. The chapter to which I refer furnishes a bibliography of English linguistics, with comments and illustrations. It points out the way of study, but does not take the place of study.

The literature in the oldest English, or Anglo-Saxon, as it is

commonly, though unscientifically called, has been so thoroughly investigated, principally by German scholars, and has been so well edited, in volumes cheap and accessible and abundantly elucidated with notes, and has, moreover, been so satisfactorily translated, that it positively solicits our steps into its broad and pleasant fields. Of course no one thinks for a moment of putting Old English literature as a culture study in comparison with Greek and Latin literature. It has no such glory of form, no such wealth of content, as these. It is not the product of an imaginative people. But it is our literature. It is an heirloom in our own family. We have the intellectual records of our race for a thousand years. From Caedmon to Longfellow the succession is unbroken. There is no proper appreciation of Chaucer possible to a reader who looks upon Chaucer as the beginning of our literature. Chaucer stands midway of our literary history. Once back to Chaucer, and another half-millennium awaits our exploration.

As a guide through the Anglo-Saxon period of our literature, it is needful to name only one book, because this one book, by its marvellous completeness, its clearness, and its scientific trustworthiness, makes all others useless. This book is Wülker's *Outlines of the History of Anglo-Saxon Literature*. The restricted range of the oldest form of English literature makes it possible to name and describe every production extant in it. Wülker exhibits the entire chart of our Old English possessions. But he does much more than this. He shows what every scholar since the old period has done in the way of exploration and discovery. His book contemplates just such a class as teachers of secondary and higher English should constitute. It is a pointer of the way, with no more fine speech than a guide-board. Wülker points out the paths, but leaves it to us to do the climbing. Teachers are too apt to enfeeble their intellects by indolently reading a class of prettily written juvenile books that aim at conveying mingled instruction and amusement, but do not awaken curiosity. Books of travel are entertaining, but they are nothing like travelling. Intellectually we can all travel,—and *travail* it will be,—even though we cannot get off to Europe.

For the earlier and the later Middle English a very satisfactory apparatus is at hand in the two volumes of *Specimens of Early English* by Morris and Skeat, and the one volume of *Specimens of English Literature* by Skeat alone. These three volumes



furnish copious passages in chronological order, reaching from 1150, when the Old English had undergone such modifications that it needed a change of name to mark its changed character, down to the "Shepherd's Calendar," in the midst of the Tudor period. Given a little familiarity with Old English forms, these books contain all that a student needs to carry on pretty thorough work in Middle English. They contain grammatical and literary matter, with notes and vocabulary. It would be no less than wicked not to mention, in connection with the study of Middle English, the honored name of Eduard Maetzner, who, for aught I know, is still, in advanced age, conducting the Luisenschule for girls in Berlin. It would take a tolerably old student of English to remember the time when Maetzner was not teaching us our own grammar, excavating the vast quarries of early English and heaping up his ore for us to use if we could. But Maetzner's *Sprachproben* is now hard to get, and the lexicon to it has now long remained unfinished. For very small books, the first and second Middle English primers of Henry Sweet should be noted.

With respect to English grammar, the state of the teacher who is not also a student is especially pitiable. To know grammar only from the school text-books is not to know it. Grammar is now universally conceived as a science. Its business is to infer laws from observed facts. The rules of good breeding with regard to speech are not laws of the language. Educated persons are less likely in their speech to reveal laws of the language than are ignorant, simple people, who unconsciously represent traditional usage. What are called the common errors of uneducated persons the historical investigator often finds to be ancient forms that once had good standing. Language being an organism, subject to its own laws of growth, it cannot be said that there has been a standard of correctness, from which the forms which the schoolmaster calls errors are departures. Good society speaks so and so, and inflicts its penalties for non-conformity, masking its rules and regulations under the guise of grammatical laws. But a grammatical law is not a rule of conduct. A scientific law is simply a generalization. The attempt to generalize may have been unsuccessful and may leave facts unaccounted for, in which case the grammarian must try again; but the speech-rules of good society in this or that age, in this or that district, exist as a code and are infringed at personal risk. What the school text-book announces as rules of grammar



are usually directed against *mala prohibita*, which the untrained teacher is very apt to regard as *mala in se*. To the investigator the distinction soon becomes clear. A curious illustration of a colloquial fault that century after century gets into literature and is there embalmed, like a fly in amber,—a fault that the schoolmaster can neither tolerate nor extirpate,—which comes to the lips of all ranks and conditions with a readiness and persistence that suggest that it may be fundamentally in accord with some law of the language, is given by Storm in his *English Philology*. As Storm follows the historical method and assumes nothing, but seeks to extract conclusions from observed data, he collects instances of the two speech-forms, *it is I* and *it is me*. It is startling to find in what excellent writers the latter form appears. Shakespeare of course was entitled to do as he pleased: but the thing appears in Addison, in George Eliot, in Thackeray, and in many more. Nor do the novelists give it merely to their humbler characters. Perhaps it is bit of *négligé* English, suitable to an easy style. Suppose it should become fashionable in spite of us!

The school grammars differ widely from each other in some important matters. What shall be the attitude of the high school teacher towards these differences? He will surely be disconcerted by them unless he has attained a standpoint from which he can account to himself for their existence. This he can achieve in no other way than by the study of grammar historically and by his own careful watching for data. The means for studying historical English grammar are abundant. The enormous work of Maetzner has been translated, so badly, I am sorry to say, that the translation is as hard to read as the original. A more serviceable, because less bulky, book is that of Koch. Nothing suffices except collections of instances, so that we may not only get deductions, but see how the deductions were made and feel their cogency. This is what Maetzner and Koch do. Such books must be large, like good dictionaries.

The works of Maetzner and Koch, and a few others, also German, are the only ones known to me that discuss English grammar in its entirety,—that is, in all its stages. The school books treat only of the existing language; and they are right, being intended for the use of children. In recent times a few books for schools have been made by scholars, like Professor Whitney, who know the language historically. But most of the text-books in vogue were

made by men who expounded forms and constructions from their inner consciousness: and their inner consciousness was the product of their knowledge of the grammar of the ancient languages. A frequent saying on the lips of classically educated men is that they learned their English grammar in their study of Latin grammar. What these men mean to say doubtless is that from their training in Latin they derived a consciousness of grammatical relations, a readiness to appreciate law in language. They should put it thus,—that from their study of Latin they gained a good preparation for the study of other languages. The fallacy that one may learn his English by studying Latin should be brushed away with a good many other pedagogic cobwebs. To learn English grammar the only way is to study English grammar. A little labor in this field clears the mind wonderfully as to the extent of one's grammatical achievements.

To such of my readers as desire to become working students of English, to whom however the path of fruitful work seems not quite clear, I commend, as an absolutely trustworthy guide who knows every corner of the great domain of English study, the German, Karl Elze, whose book on *English Philology* I have already named. Elze's name is well-known to all who have made serious studies of Shakespeare. He is professor at Halle, and is now nearly seventy years old. His latest work seems to me the one by which he is destined to become most widely useful to students of English. As a philologist Elze is a disciple of August Boeckh, and applies to English Boeckh's broad conception of classical philology. To this procedure it is possible to take exception, as is done by Gustav Körting in his *Encyclopaedia and Methodology of English Philology*. But for purposes of practical utility we may omit the question of the scientific justifiableness of Elze's adoption for English philology of the categories of a great classical philologist, and simply acknowledge ourselves thankful to him for including so many departments of English study within the scope of his book.

Elze entitles his book a *Grundriss*,—an outline or sketch,—of English Philology. It is by no means a large book. It does not develop any department of its subject to the proportions of a treatise. It is essentially a student's handbook; a *vade mecum*. Yet it is much more than a bibliography, although it is a bibliography of the most complete kind. It shows how each branch of English Phil-

ology should be pursued. Thus it gives specimens of research, which are always highly interesting and stimulating. Many pages of the work are devoted to lists of books essential to the English student. These lists include books in English as well as in German. The more recent and accessible of these books are often briefly characterized, so that the young worker may be guided in his choice and not throw away his precious time on unrewarding labor. But the bulk of the book does not consist of book-lists. It is a book to read continuously. Every chapter of it is fitted to engage the attention and to beget a feeling of security as to the results to be attained by the methods of study which it expounds and illustrates. Its purpose is not to show how a semblance of philological knowledge may be achieved by culling here and there results announced by the real workers. It contemplates a public of enthusiastic students of English, not a public of *dilettanti* just now caught by a fashionable English fad. After an introduction in which he seeks to establish the principles of his science, Elze proceeds to mark out its channels in chapters bearing the following titles:—Hermeneutics, Criticism, Geography, History, Private Antiquities, History of the Literature, History of the Language, Lexicography, Grammar, Stylistic and Metric. He would be indeed an accomplished teacher of English who should not, under these heads, find Elze full of suggestion and light. Instruction in English literature in any school whatever would be at once enriched and strengthened when the teacher should begin, with clear purpose in view, to read these chapters and to extend his studies according to their directions. For these studies bestow their rewards at once, and thereafter continually, as the student advances from conquest to conquest. There is no set goal of attainment on arriving at which the scholar becomes competent to teach. He becomes *incompetent* to teach the moment he is conscious of having arrived anywhere.

Everyone knows for himself where his shoe pinches. Every teacher, unless he is in the last stage of self-complacency, knows where his knowledge needs enlargement. The teacher of English may, very likely, need more than anything else, at the present moment, a better acquaintance with English history. The medicine for this defect is easily applied. One needs in English teaching all the history one can command. The small manuals will do only for immediate use as stop-gaps. Histories of such range as those of Froude, Gardiner and Macaulay must be undertaken at last. One



reads authors' lives, to but little purpose unless one can set these lives correctly in their historical background.

Perhaps one finds in himself a lack of familiarity with the topography and antiquities of London, which throughout our entire literary history are ever reappearing in close and necessary association with the great writers. Were anyone about to go to London in the flesh, he would bethink himself of Baedeker, and Murray and Hare: as we teachers of English must all go to London in the spirit, we shall do well to resort to the same sources of knowledge. Should one take Elze's two pages full of London titles into any good library and get access to as many of the books there named as the library could furnish, one would soon see his way to make most interesting discoveries in London lore.

Perhaps it is in *poetics* that the teacher becomes conscious of a desire for more knowledge. Here, then, is Mr. Ginn, who will introduce us to Professor Gummere's Handbook, after studying which, I warrant no one will fail to appreciate more truly and enjoy far more profoundly poetic form. Then Mr. Ruskin will be found to be the author of a very small treatise on metres, which will prove as interesting as anything else that comes from his pen. The Germans have school text-books of poetics. The subject is infinitely interesting. One will be easily drawn on in its study to the undertaking of even Schipper's large work on English Metric. Much better will it be, however, when one has felt his way a little under the conduct of a guide, to explore for one's self among the poets. The thing to be shunned above all others is the bringing of Greek and Latin prepossessions into the study of English metres. English rhythms are not an outgrowth of classical rhythms.

But the department of work to which the teacher may most readily, and with most immediate profit, devote his energies, is studious reading of literature. Whoever teaches Shakespeare and Milton, e.g., should without delay read the whole of Shakespeare and Milton. The plays and poems not read in school are the best commentary on those which are read. The teacher should put himself on the level of the editor and the annotator, and be as competent as he to expound texts. This reading of English classics should go on constantly. It will be a perennial spring of life. But it must not be the passive, indolent reading of those who read to while away the time. The student must read sitting up at his table, not slumping lazily in an easy-chair. He must read, pen in hand. He



must collect his own data for comparing and judging in matters of grammar and literary history. A growing note-book is the sign of growing knowledge. He who gathers his own facts becomes competent to annotate the annotators,— who often need notes more than the texts do,— and to grow from indifference to them up to a hearty dislike of them as obstacles, rather than aids, to study.

There are multitudes of books about the various departments of English study which have in view readers of small attainment and small courage, and whose effect on such readers is to beget in them habits of intellectual dependence. The mass of school-books with which teachers have to deal is narrowing in its effect on the mind. Most of these books need not have been produced at all. To people who do not frequent good society manuals of etiquette are all-important. To some, perhaps, they even take the place of good society. What more dreary fate than to be doomed to perpetual reading of rhetorics, histories of literature, manuals of composition! To write well is to write like Newman, George Eliot, Cobbett, Hawthorne: why not then acquaint ourselves with such writers and so learn their secret? Given excellent models, why not study the models, rather than books about the models? No so poor punctuators as those whose heads are filled with rules of punctuation. No so poor writers as those whose style is formed on text-books of rhetoric. To believe the rhetorics, one element of our language is stronger than another, and *begin* is inherently a stronger word than *commence*. Our only defence against such sciolism is to resort to the literature and ascertain usage for ourselves. Professor Hill preaches vigorously against the use of the word *aggravate* in the sense of *to exasperate* or *provoke*: but Doctor Murray simply gives excellent authorities for the use of the word in this sense. We must have a standard by which to measure the competency of our guides.

The teacher must have access to the primal sources of knowledge. There are many who like to lecture to him about his culture, his duties, his privileges; and I believe he likes to sit passively and be lectured to. Certainly he likes to invite people of other professions to address him. You know how submissively Eve listens to Adam's superior discourses, and how Adam enjoys expounding to her the mysteries of the universe.

A well-known peculiarity of the secondary schools of Germany is that the teachers of these schools rank as to scientific attainment

with the university professors. What would be the harm of having it so in this country? Is it to be supposed that Doctor Mätzner knows too much to be a good teacher of the little girls of the Luisenschule? Who will defend the small attainment of American high school teachers as a good thing? We have all heard again and again how superior in scholastic attainment the German schoolboy is to the American. Convinced as we are of the natural superiority of the American boy in alertness of intellect, we are compelled to cast about helplessly for reasons with which to account for his inferior achievement in school and university. As a contribution to this ever-recurring discussion, I suggest that the low standard of American school work is fully accounted for by the low standard of professional knowledge in American teachers. Much as the German or French boy surpasses, at any given age, his contemporary in this country, probably the American boy comes nearer to equalling his teachers than does the boy in France or Germany. A boy in a gymnasium has a better chance to get scientific teaching of English than does a boy in a high school. The gymnasial English teacher knows his special subject, scientifically, better than the high school English teacher.

Considering the abundant opportunities for thorough English study now offered by numerous colleges in this country, would it not be feasible at once for such a body as the supervisors of Boston to announce that hereafter candidates for high school positions involving the teaching of English should be examined in the grammar of Old and Middle, as well as Modern, English; in the development of the literature through its successive stages from Alfred to Victoria; in some one period of the language and the literature in which the candidate had made special studies; and, lastly, in German, as the indispensable instrument of scientific research and as a second Teutonic language? Here, as in other departments of secondary work, the time is ripe for great steps in advance.

But while the supervisors wait, it remains for us to work. The new day has surely dawned for teachers of English. While the time fleets, we can be making precious gains, just as well as if we were about to be called up for examination. *Dies diem docet.* The deficiency of today, if we are resolute and in earnest, will become the possession of tomorrow.

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## THE SUBJECT-MATTER AND METHOD OF THE FIRST YEAR'S LATIN STUDY.

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IN presenting this paper I take it for granted that all the purposes for which Latin is commonly studied, including the attainment of mental discipline, can be best attained by making the power to read and write Latin the main object of the preparatory course. The study of grammar, of Roman life, of English derivatives, and even of subject matter, though valuable, should be made strictly subordinate to the end just mentioned.

In recent years, and especially since the appearance of Mr. Tetlow's "Inductive Latin Lessons," the method of the best Latin teachers has been, to a greater or less extent, inductive. Probably all progressive teachers believe that pupils should gain some of the facts of the language by the inspection of the language itself rather than by learning statements about it in the grammar. There seems to be, however, wide difference of opinion as to what the material for induction should be, and as to the extent of the knowledge which a pupil may safely gain for himself from Latin text.

Some evidently think that little more than the rules of syntax ought to be learned from Latin text, and that these rules of syntax can best be learned from detached sentences from different authors.



Others, on the contrary, believe that syntax, forms, vocabulary, word-order, and in fact substantially all the leading facts and rules of the language, should be learned from the language itself, and that the pupil's observation during the first year should be directed to one connected classical work. This may be called the stricter inductive method upon connected text. I am a firm believer in the latter method.

In applying it, I have used Cæsar as the connected text, because he is the first Latin author read by probably nine-tenths of our American beginners, because he is thoroughly classical, and because of his unity and simplicity, which will be fully brought out later in this paper. As a matter of fact, all our introductory books are professedly preparatory to Cæsar.

The pupil takes up Cæsar on his first day of study, but deals with the text in a manner essentially different from that adopted by one who has studied for a year.

First, but a small portion of the text — only a line or two a day for the first few days — is assigned at a time, while ample practice is secured by Latin-English and English-Latin exercises based upon this text.

Second, the teacher *in advance* goes over the text to be assigned for the next day before his whole class. He invites observation on particular points, insists on the application to the new material of all facts previously learned, and draws out of the class, or himself states, all essential new facts illustrated in the new material. As a rule the pupil is required to learn no ending and no rule until they have been illustrated in the text.

Third, the pupil is required to go over the same text again and again by pronouncing it with only an English word-for-word translation (or rather parallel) before the eye.

After experience with the non-inductive, the partial-inductive, and the stricter-inductive methods, I find that the latter has the following advantages over one or both of the others: —

First, it is more *consistent* to teach forms, syntax and vocabulary inductively than it is to teach only the syntax in this way while forms and vocabulary are learned, not from the text, but from artificial tabulations. The *habit* of independent observation cannot be formed while the pupil is neglecting it in the larger half of his work.

A second advantage arises from *unity* of subject-matter. This subject-matter, if we take Cæsar, is the product of one author, conspicuous for his simplicity and definiteness, writing upon one subject. The pupil needs to get accustomed to but one set of peculiarities, not several, as he has to do if he passes from a fragment of one author to a fragment of another. After getting accustomed to his author and the subject, he can anticipate what is coming and so translate rapidly. The vocabulary consists of terms which are related in meaning and so one term helps to recall another. Most important of all, the unity of subject-matter provides for a proper recurrence of words and the pupil learns the common expressions, not so much by the repetition of vocabularies of isolated words as by the actual work of translating new matter. In this way the advance takes care of the review, and the whole desirable vocabulary is kept going. Those who have noted how often, in our first-year books, desirable words introduced into one lesson, are not repeated for many lessons if at all, will appreciate this advantage of connected text. It is simply impossible for any author to write upon different subjects a series of disconnected sentences which will have anything like the unity of vocabulary which any author unconsciously uses in writing upon one subject.

Closely connected with this advantage of unity is the further advantage which comes from the limited vocabulary and the limited variety of form and syntax which Cæsar uses. Let me speak first of the vocabulary. Many teachers do not realize how limited the vocabulary of Cæsar is. A list published in Latin some years ago shows that there are only 179 words which occur more than 100 times in Cæsar's writings. There are less than 300 words which occur five or more times in the First Book of the Gallic war, and in the fifteen pages of the Helvetian war there are only 950 words altogether. Even in the first chapter of the First Book, while there are 181 forms, there are only ninety-eight different words, or fifty-four per cent of the number of forms. In the second chapter the percentage of new words to the whole number of forms is forty-seven, in the third, thirty-seven, in the fourth, thirty-six. In the fifteenth the percentage has dropped to twenty-four, in the sixteenth to twenty-two, and before the close of the Helvetian war, to fourteen. That is to say, a pupil who reads properly two pages of Cæsar will need to look up only one word in three, and one who reads fifteen pages, only one word in seven.

The pupil who reads during his first year scraps from different authors will find more new words in the early pages of his reading, and the number of new words will not diminish as he advances with anything like the rapidity of Cæsar's as described just now. It may be well to read an anecdote outside of Cæsar occasionally, as a diversion, provided it is something not too remote from Cæsar in style, but a series of such disconnected passages involves a great waste of vocabulary work, and for success both in sight reading and in Latin composition a thoroughly facile command of a well-selected narrative vocabulary is absolutely necessary.

Let us pass now to the limitation in the number of forms to which the consistently inductive use of Cæsar as our text will lead. Cæsar has practically no imperatives, no first or second persons indicative or subjunctive, no future and future perfect indicatives, no future infinitives passive, few gerunds and supines. Therefore the pupil during his first few months' study should not be drilled on these forms, for he cannot use them in reading Cæsar. The number of verb-forms to be learned is thus reduced from 150 to 40. Only a little more than one-fourth of the forms usually learned by the beginner during the first year are really used by him during the second year of his Latin course while he is reading Cæsar.

On account of the unity of subject-matter in Cæsar, an analysis of the grammatical material of the Helvetian war will give us an idea of the whole contents of the "Commentaries" accurate enough for all practical purposes. The verb forms in the Helvetian war are as follows:—

	INDICATIVES.	SUBJUNCTIVES.	INFINITIVES.	PARTICIPLES.
Present,	150	45	159	8
Imperfect,	66	99		
Perfect,	87	16	25	90
Pluperfect,	46	35		
Future,			14	3
Gerunds, 5; Gerundives, 12; Supines, 3.				

The emphasis in our school exercises ought to correspond to the emphasis in Cæsar if we are preparing for Cæsar. It is important, then, to note that the present indicative and present infinitive are decidedly the most frequent forms, that there are more imperfect subjunctives than of the other three tenses put together, four times as many present infinitives as of the other two tenses put together, and nearly four times as many perfect participles (exclusive of their use in compound tenses) as of the other three put together. Is the

emphasis in our class-rooms, as a rule, anything like what these figures would suggest?

Let us look at the declensions. In studying the second declension probably more time is devoted to *puer* and *ager* than to *servus* and *bellum*. If one would gain an idea of the relative frequency of these forms, it must be remembered that the endings *-us* and *-um* are found in every first and second declension adjective (including, of course, three of the four participles); then let one try to think of three nouns and three adjectives in *-er* which are in the second declension and are common in Cæsar.

In the third declension, paradigms are so arranged in grammars and exercise books that there is no distinction between nouns and adjectives which stand by themselves, or as representatives of very small classes, and those which stand as representatives of very large classes. For instance, nouns which, like *lapis* and *caput*, stand almost alone in narrative Latin, are as prominent as the great class representatives *aetas* and *turris*. Our grammars and exercise books give under the third declension from thirty to fifty examples, or sample nouns and adjectives, without any note or hint as to the comparative frequency of the various types.

In the Helvetian war there are 145 third declension nouns and adjectives. Of this number 115, or four-fifths of the whole, may be classified under eleven different heads. The following eleven nouns may be taken to represent these classes of nouns and adjectives: *rex*, *civitas*, *dolor*, *oratio*, *multitudo*, *flumen*, *corpus*, *vulnus*, *turris*, *mare* and *cliens*. This is a fact of great importance. The pupil should decline *civitas* more frequently than *caput*; if there is time in a recitation for review drill on only eleven nouns, or if there is room at the board for writing only eleven, the eleven selected should be the types of great classes which I have mentioned rather than eleven selected from the other twenty or thirty classes which cover only one-fifth of the nouns and adjectives common in Cæsar.

In the classification of gender endings of the third declension, the new Allen and Greenough's Grammar gives twenty-six endings with explanatory remarks in immediate connection with nine of them. The following list of ten endings will cover almost as many of Cæsar's nouns: *-or*, masculine; *-as*, *-is*, *-es* not increasing, *s* preceded by a consonant, *-io* and *-tudo*, feminine; *-e*, *-men* and *-us*, neuter. In testing this list, it must be remembered that gender endings have nothing to do with names of males and females, and that the longest rule for gender is only an approximation.



Let us turn now to pronouns. Of those given in our grammars, *ego*, *tu*, *iste*, *quispiam*, *quidam*, *quivis*, *quilibet* and the pronominal adjectives *meus*, *tuus* and *vester* do not occur at all in the Helvetian war. *Is* occurs 146 times, *qui*, 120 times, *se*, sixty-three times, *suus* (pronominal adjective), forty-eight times, *hic*, twenty-nine times, *ipse*, twenty-eight times, *noster* (pronominal adjective), thirteen times, *idem*, ten times, *ille*, seven times, the indefinite *quis*, four times, and the others (which occur at all), once or twice each. The most common pronouns are, therefore, *is* and *qui*, which together occur more times than all the other pronouns and pronominal adjectives put together. In former years I have made *ille* as prominent in my class-room as *is*, though in Cæsar *is* occurs twenty times, where *ille* occurs once.

But not only are many forms learned by the pupil which are unused and, therefore, needless, and not only is great emphasis put on many very rare forms, but many common forms are presented to him before they need be. If the forms are learned only as the text presents them, they will be learned very gradually and be used very thoroughly before new forms are presented. In the first chapter of Book I. of the Gallic war, there are thirty-four different endings, counting the regular endings of nouns, verbs, adjectives and adverbs. To this text with the exercises and the review, at least seventeen recitations will usually be devoted. The pupil is thus asked to learn on an average about two endings at each recitation. Is not much more than this required of him at the beginning by the old method? It has been customary for many years to assign to the pupil for his first lesson the whole declension of *mensa*, ten or twelve forms, with perhaps one or two verb endings in addition. Then in a day or two the whole of some noun of the second declension — eleven or twelve endings more. The pupil in such cases is often in the plight of an inexperienced surf-bather who is knocked over by one breaker only to be soused and blinded by a second before he can recover himself.

I should say that, on conservative estimate, one-half of the time usually devoted to learning forms during the first year is wasted. This is owing to the introduction of forms unnecessary in Cæsar, to the premature introduction of necessary forms and to the disproportionate emphasis given to the rarer forms.

The waste in learning syntax is also considerable. After careful study of the conditional sentences in Cæsar, I am unable to see any

necessity for studying subjunctive conditions until the pupil passes to some other author. I can see many objections to so doing. The subjunctive condition is rare in Cæsar; it is so difficult to the beginner that great emphasis has to be put upon it, and this emphasis at so early a stage in the pupil's course is likely to lead to the comparative neglect of the common indicative condition, and to the delusion on the pupil's part that *si* takes the subjunctive. Among other subjects in syntax which are introduced too early and too often are the potential subjunctive, the hortative subjunctive, two accusatives after verbs of asking, etc., the adverbial accusative, place constructions with names of towns, and the genitive with special verbs.

The three subjects in Latin form which, to my mind, require most emphasis during the first year both because of their difficulty and their usefulness in later study, are the third conjugation, the third declension, and the declension of pronouns. I have already mentioned forms under each of these three groups which require more emphasis than other forms under the same groups.

The three similar subjects under syntax are the ablative case, the indirect discourse, and the subjunctive with *ut* or *qui*. The syntax of the ablative case must, before the end of the year, be learned almost entire as it is given in the large print of our grammars. It is interesting and useful to note that this case is used about nine times as often as the dative, with the form of which it agrees in the plural. The great facts in regard to indirect discourse should be gradually but very thoroughly learned during the first year. I doubt, however, whether it is best to expect the pupil to turn the harder passages back into the direct form without help. This is difficult work, on which the best Latin scholars disagree, and requires a maturity of mind and a facile command of Latin forms which cannot fairly be expected in the first year.

In the Helvetian war there are 195 instances of the use of the subjunctive. Of these about ninety-five per cent may be grouped under the headings indirect discourse, *ut*-constructions, and *cum*-constructions.

If the three subjects in form and the three subjects in syntax just mentioned be thoroughly mastered, and also the vocabulary of Cæsar so far as it has been used, a good work has been done; but something more than this is necessary before the pupil can read Cæsar with any facility. I can perhaps best illustrate my meaning by comparing two Latin selections very near to each other in a book

before me as I write. One is an account in modern Latin of the meeting of Queen Elizabeth and Sir Walter Raleigh, and runs thus, crudely translated to show the order and sentence structure. "Elizabeth, queen of the Britains, always used to wear garments splendid and costly. Perchance, with a great crowd of companions, she was walking through the streets of the city. Suddenly she sees before her feet much mud. The queen stands uncertain because she fears the slippery way," etc.

The other is Cicero's well-known story about Nasica and Ennius, and runs thus: "Nasica, when to the poet Ennius he had come, and to him from the door seeking the maid had said that Ennius at home not was, perceived that she by her master's order had said it and that he within was," etc.

Here in the first case the order of the Latin is almost exactly that of English, in the second it is very different. The two selections are of about equal length. The modern selection contains one subordinate verb, the classical contains ten, the modern contains eleven principal verbs, the classical seven, the modern has one subordinate conjunction, the classical three, the modern has not a single pronominal form of any kind, the classical has fifteen, the modern has no participle, the classical has one.

The differences here mentioned are accounted for by the fundamental difference between English and Latin, thus stated by Weil in his "Order of Words": "Greek and Latin sentences form a chain of which the parts interlink. French (or English) sentences may be compared to a necklace of pearls; they are joined only by the thread of the thought." The Roman tendency to "interlink" thought finds expression in the number and variety of participles, pronouns and subordinate verbs, which all real Latin contains, and in the striking variety-in-unity of the Latin word order. Manifestly the story above about Raleigh is not constructed upon a Latin model, but upon an English one. It does not show the Latin "way of putting things." It is because pronouns, participles and the subjunctive, as used in subordinate clauses, are deferred until almost the last of the year and then very inadequately used in translation, and because too little attention is paid to Latin word-order that there is what another has called an "unfathomable gulf between the Latin lessons and Cæsar," which is the first classical text of almost every pupil. The subject matter usually employed, therefore, is faulty in two opposite directions. It

requires the pupil to do that which ought to be left undone and does not require him to do what ought to be done.

It is a strong evidence of the excellence of the method here described that it is directly in line with the steady educational progress of the last fifty years. Thus, in arithmetic, the pupil now studies his example and its solution before he learns his rule (if he learns a rule at all), and it is seen to be absurd for a pupil to spend time on cube root when he cannot foot up a butcher's bill correctly; in science, the illustrated lecture took the place of mere text-book work, and now the laboratory with experimental work by every pupil has taken the place of the illustrated lecture; in history the best teachers make the elementary pupil scrutinize the essential facts in the history of a nation, classify them and draw appropriate lessons. For elementary English reading complete and somewhat extended stories and poems by masters of English are often substituted for the fragments of the reading book. Even in language much advance has been made since the days when the grammar was learned with all its exceptions before any of it was applied in translating Latin. As the real object of Latin study became apparent, many exceptions were omitted, Greek nouns were generally omitted during the first year, the vocative has recently been omitted from paradigms in some books, the common perfect participle is used instead of the rare supine in giving the principal parts of verbs, the verb synopses in many classes are most frequently given in the third person. Sight reading is making large advances everywhere. Anecdotes have taken the place of single sentences, even in the early months of Latin study. Most important of all, Latin composition is based upon connected Latin text. The Harvard requirements demand such preparation in composition, and we have an edition of Nepos adapted to it. Two excellent composition manuals have appeared governed by the new idea and hence entirely different from the old books in which miscellaneous scraps are clustered after a rule. Follow out the principle underlying this new idea in Latin composition to its legitimate consequences and we shall in a few years have in our schools all I suggest in this paper.

I will briefly answer some objections. It may be urged that the forms seldom used in a text are the very ones which ought to be most carefully learned so that the pupil may not be misled or in doubt when he does occasionally meet them. I answer that in many cases the form, though peculiar, shows well enough what it



is or, at least, where to look for its explanation in grammar or lexicon. For instance, the pupil of average brightness would not be greatly puzzled if he should meet *deabus* in his reading. Where the form would not be recognized, the teacher or the notes upon the passage ought to be expected to explain it when it occurs. The explanation will then be much better understood than if the difficulty had been anticipated.

It may be said that the forms which I have omitted in my statement of the subject-matter for the first year must be learned some time and so may as well be learned in the beginning. I cannot at all agree to this. Grant, for instance, that it is advisable to learn the first and second persons of the verb during the latter part of the year for the sake of turning the indirect into direct discourse. Is it not manifest that it is a very different thing for a boy to learn additional forms during the last third of the year after getting the common forms firmly fixed in mind than it would be for him to struggle with nearly four times the necessary number during the first third of the year? Let us sympathize with the pupil who is passing from the almost uninflected English to the highly inflected Latin — from perhaps a score of regular inflectional forms to hundreds of them. At best it is hard work. The pupil is in more danger from complexity and confusion than from single points difficult of comprehension. The most frequent difficulty expressed by the pupil is, "I get all mixed up." The time to learn the peculiarities of Virgil is when Virgil is studied. If these peculiarities are learned while Cæsar is studied they will either be forgotten before the pupil reaches Virgil or they will be retained by a grammatical drill which has nothing to do with the main object of the pupil who is reading Cæsar, and the time devoted to this grammatical drill must be subtracted from the time given to reading Cæsar. It is no wonder that many teachers have little or no time for sight reading.

Some object that by beginning with Cæsar we precipitate immediately upon the pupil so great a mass of grammar and grammatical explanation that he cannot hold or digest it. As to forms, I have already shown that they are brought in at the rate of two or three per lesson — a decidedly more gradual process than is usual in beginning Latin. As to syntax there is very little of it in the First Chapter which is different from English syntax. All the verbs used are in the present indicative except one perfect indicative. This objection arises from misapprehension on two points. It is evi-

dently supposed that when *Gallia* and *divisa* are taken up the whole word is declined in the usual way, and that when the perfectly regular form *differunt* is reached the irregular conjugation of this verb must be considered. Nothing of the kind is done. *Gallia* and *divisa* are compared; it is noted that both are nominatives singular and end in *a*, and this fact only is held and used. When *unam* and *aliam*, just beyond, are reached the accusative ending *am* is noted, compared with *a* in *Gallia*, and the pupil has two forms of his first declension, and no more until he meets them in the text. In the same way *differunt* is simply translated and its ending noted. Of the twenty-one pronominal forms in the first chapter all but three have regular endings of the first, second or third declension. It would be absurd, under these circumstances, to require the pupil to learn the complete declension of *is*, *hic* and *qui* at this point in his study. It seems, further, to be supposed that full explanation of every form or construction, no matter how difficult, must be given the first time the form or construction is used. As a matter of fact the form in such cases is retained by the translation and by such partial explanation as may be easily assimilated, and the full explanation is reserved till later. For instance, it would be manifestly unwise to attempt a full explanation of the gerundive construction *ad effeminandos animos* in the first chapter of the first book. The pupil learns that *effeminandos* means "weakens" in the phrase "to weaken minds," and further, that both *effeminandos* and *animos* are accusatives plural masculine like *Gallos* which he has just learned. It will be seen that the method presents "facts before reasoning," and that the text does not "dictate the order of development." It may frankly be admitted, however, that the order of development is somewhat different from the conventional one which some may consider the natural one. The accusative of a word is often learned before its nominative, and this course seems to me quite as natural as the traditional method. The accusative is certainly more common than the nominative and much more useful in forming the other cases.

The general objection — "It is too hard," is sometimes raised. In what respect is it harder than the current method? It has been shown that it requires a far less extensive range of forms and a more limited syntax. It does require, however, the habitual and concentrated use of the powers of observation until a habit of observation is formed. This with poorly trained pupils is hard, but the good

work must not on that account be abandoned. We complain bitterly enough that our pupils have not learned the habit of observation in the grammar school. Shall we pass them on to the college in such a condition that complaint of us will be justified? The constant demand throughout the pupil's course and the constant demand of the work of life is that the pupil shall be able to see and to use what he sees. The ability to do this does not come by nature. Let us see that we do our duty in the matter.

I would make this work of observation easier by constant and very definite guidance. When Agassiz left the student with the now famous fish, he gave him only the general direction to see what he could find and then left him to himself day after day. I should not dare to pursue so heroic a course with the immature pupils we teach. They have as yet so little appetite for research that they would very likely become utterly indifferent or discouraged. I would like to remain in the room with the pupil and the fish, to suggest the drawing materials, to lay another fish by the side of the first and to say "which has the higher fin? which the broader back?" and it is precisely in this way that I try to teach beginners in Latin. Such work even as this on the part of the pupil is independence itself when compared with the "telling" method. That was an awful indictment which was brought against his teachers by a distinguished educator when he said that he did not remember that these teachers ever helped him except by downright telling.

A few suggestions of a general character may not be amiss.

The pupil should take in his Latin by every convenient avenue, by seeing it with the eye, writing it with the hand, pronouncing it with the tongue and hearing it with the ear. Only thus will his knowledge of the language be many-sided and complete. Yet many teachers almost unconsciously neglect one or the other of these avenues. Perhaps the ear is most frequently neglected. Dictation exercises and conversations with the teacher in Latin appeal to the ear and will be found very useful. These conversations should be upon the subject-matter of the text just then being read, and not upon its grammatical construction. Grammatical terms are not useful in reading classical authors and are so much like the corresponding English as to give the beginner the idea that he can translate any Latin word by the English word which most resembles it in spelling.

Too much time is usually given to the repetition of paradigms by rote, too little to Latin composition. I should say about one-tenth

of the recitation hour is enough to give to the rote repetition of paradigms, but that nearly one-half of the time during the first half of the year should be given to Latin composition in some form. The forms must be learned, but they can be better learned from the text, and fixed by practice in composition than by reciting paradigms. The use of paradigms is to help the pupil to group together forms which belong to the same declension or conjugation. One may often catch a pupil who is relying too exclusively upon his paradigms, running through the whole declension to recall an accusative or ablative plural. If the pupil learns the form from the text he will recall it, if he hesitates at all, by its association with the narrative or with a neighboring word of the text. A good way to decline *Gallus*, for instance, is to require the pupil to insert the proper case of the noun in such simple sentences as "He sees the Gaul," "The Gaul is absent," "The Gauls are absent," "Gaul is the land of the Gauls." If the oral repetition of such sentences takes too much time, write a well selected set of easy sentences illustrating one or all declensions upon the board and point to the form which you want. Such an exercise is not so very much slower than the rote recitation of forms, is decidedly more interesting because of its variety, and incomparably superior as a test of the pupil's understanding of the cases.

Often grammatical construction is taught in such a way that the pupil does not see how the sense comes from the grammatical relation of the words. Some teachers have the whole lesson translated and then go back and take up the syntax; many more are not particular to lead the pupil to correct an erroneous translation by asking for the construction, a neglect or misunderstanding of which led to the error in translation. If the pupil is taught to translate his Latin according to the method explained by Professor Hale in his "Art of Reading Latin," he cannot fail to understand the true relation between the syntax and the sense.

The method of study which I have outlined depends for its success, like every other, upon the thoroughness with which it is carried out. It requires hard work on the part of pupil and teacher. But it applies this work where it will do the most good, incites the pupil's interest by making him a discoverer, and so makes him willing to work hard.

No man can reach the highest success in teaching first year Latin who does not appreciate his privilege in being permitted to do it. It is a *high privilege* to lead a pupil into his first language besides



his own, to see the dawn of new ideas which this language brings and the increase of mental power which it engenders. The difficulty of the subject puts both teacher and pupil on their mettle, compels the teacher to think clearly, to explain simply and to invent devices to aid his teaching, it develops in the pupil moral force and steady, independent effort, and in both the good teacher and the good pupil it establishes a sympathy and respect which the lapse of years will not destroy.

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*ON THE TEACHING OF LATIN AND GREEK  
DURING THE FIRST TWO YEARS.*

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UNDOUBTEDLY the classics are on their trial. Latin and Greek, the venerated handmaids of higher education, are decried, depreciated, and on all sides looked at askance. In vain do their friends point to the magnificent work of the past. In vain do we call the great muster roll of scholars nourished on the wisdom of the ancients and the nectar of the gods. We are told it is all old fogysm; that old-world languages and old-world ideas are well enough for old-world fools; that we moderns have got beyond all this; we need a richer pabulum; that it is worse than folly for our wise young men to waste years of their valuable time in the acquisition of musty old languages, dry, repulsive and useless.

What truth is there in this cry which of late has been reiterated *ad nauseam*? Like most widespread popular errors there is in it a residuum of truth; we grant at once that there is something reasonable in the statements of our opponents. They say that a young man or young woman spends years in the painful acquisition of a little bad Latin and worse Greek; that at the end of a tedious career they cannot read an oration of Cicero with pleasure; that Homer is to them a sealed book beyond the small portion they have laboriously studied; that even this fragment they incontinently put from their memory as speedily as possible; that they cannot write the most elementary Latin or Greek with ease or even with correctness; that as soon as school and college days are done the classics exist in their mem-

ory only as a hideous nightmare, or are reserved for the intellectual torture of their unfortunate boys when they too, shall come to be offered, melancholy victims on the altars of the wicked old gods of ancient Greece and Rome. Alas! "'Tis true, 'tis pity; and pity 'tis, 'tis true," and justly do practical men say these things ought not so to be.

It was not always so. Time was when men whiled away a weary hour with their Tacitus or Juvenal, when they quaffed their Falernian with the dear old epicure and smiled at the follies of the age. Time was when men wrote their books in Latin, wrote to one another in Latin, and this fine old language was to them as their mother tongue. Even now there are parts of the world where, when the modern tongues fail to establish communication, men talk in the language if not in the style of Cicero. Why has it all changed?

The answer to this question furnishes the solution of the whole problem. Latin is no longer the means of intercommunication because it is no longer so needed. And the question arises, why do we continue to teach dead languages in our schools and colleges? With the rapidly extending and now almost universal use of English, with accurate and beautiful translations of the classics done for us into our mother tongues, why do we not relegate the old languages to the musty tomes on dust laden library shelves?

We answer that we continue to use them primarily because we believe them to be an invaluable means of mental discipline, and in a lesser degree as furnishing the key to the literatures of the ancients. In opposition to those who claim that the same mental power can be obtained by the study of the modern languages, by scientific pursuits, by utilitarian hobbies without the classics, we assert that there is an indefinable culture, an aesthetic aroma, a something nameless but not difficult to appreciate, which comes from the study of the ancient literatures in their own tongues, and which can be secured in no other way. In addition, we think that in the process of acquisition rightly conducted, there is developed a mental grip which is of service even in the practical affairs of every day life. Without underrating the value of the sciences or mathematics, we consider that classics superadd to these something so important to the gentleman and the scholar that he can by no means afford to be without it. Not taking time to defend our position at length, we state what we deem the facts, and leave the proof to the testimony of past gener-

ations and of those master minds who have owed to their classical training their world wide reputation.

Assuming, then, the desirability of retaining the classics in our school curriculum we are nevertheless compelled to admit that modern conditions have so modified our courses of study that it is no longer possible to secure the old results in the old way. Nor do we wish to do so. The sciences, mathematics, English and modern languages, and all the other studies which wisely or unwisely now crowd our time tables and cause the makers of them so much anxiety, cannot be put aside. The classics can never again monopolize the attention of the student as once they did. Formerly a youth could master his Latin and Greek because, beyond mathematics, he had little else to claim his attention. This condition of things can never return. So it has happened that the classics have gradually been crowded to the wall, and in this unhappy posture have failed to be of good service either as discipline or for culture. Nor can they ever again be of use as in the past unless we can so modify our methods so as to permit the thoroughness which disciplines, and the ease which leads to culture. This, and not the abandonment of classical training, is what our universities and colleges should demand and what practical men will appreciate.

And so we come to the main question: What methods shall we adopt so as to retain our classics with all their valuable influences for good, their educative and disciplinary power, their development of culture and elegance, and yet give them only the comparatively small portion of time now grudgingly allotted to them and bring them into line with the demands of this impatient and restless age? Too often teachers failing to see the difficulty, or hopeless as to a remedy, and struggling to teach reluctant students by old and now impossible methods, have spent all their zeal in securing disappointing and unsatisfactory results.

The problem how to harmonize the old and the new, former thoroughness with modern haste, is by no means an easy one, and I cannot hope to do more than throw out a few suggestions.

The difficulty lies largely in that part of the educative process which falls under the heading of this paper, viz. the teaching of the first two years. Careful thought on this subject has convinced me that to meet the demands of an age so intolerant of long deferred results and non-utilitarian methods (and we dare not ignore these demands) it is absolutely necessary to make the preliminary course

as short and practical as may be without the sacrifice of thoroughness. Happily this is not impracticable if we are willing to be at the pains to remember that the most valuable discipline of the classics is to be secured, not as some would have us believe by discipline alone for its own sake, but by such a combination of discipline and practical work, or rather by discipline through practical work, as shall give the student the benefit of mental training almost without his knowing it, and, while his attention is fixed on one result, shall secure another and better result. To make my meaning clear, I would not nowadays strengthen the memory by committing page after page of grammar in Latin, while Latin is an unknown tongue, nor would I use the dignified and beautiful writings of the ancients as a mere *corpus vile* for the accumulation of a mass of uninteresting and unnecessary grammatical rubbish. I would conform to modern methods by making the acquired knowledge immediately practical, and, while laying the foundations broad and strong, lure our neophytes as soon as possible into the pleasant paths of literature. In other words, while one aim shall be the easy enjoyment of the ancient literatures as soon as possible, we must not forget to obtain on the way the mental power which the classics are so able to impart. By the second result we shall most benefit the student, and by shortening the process of the first we shall deprive of their favorite argument those who say our teaching produces no results.

The question, then, becomes largely one of ways and means. But before speaking of this I should like to say that I am not of the opinion of those who think that good methods will necessarily make classical scholars. There are some whose language faculties are so hopelessly abortive, or whose proclivities are so strong in other directions that not by any process nor by any painstaking can they be forced in a direction contrary to their nature. For such let their mother tongue suffice, or in science or mathematics, for which they often show a decided taste, let them find the training they want.

Granting that Cæsar is the best avenue by which to approach classical literature, I can see no reason why one year at the age at which most students begin their classical studies should not be amply sufficient for acquiring the grammar and constructions involved in Cæsar and completing a considerable portion of that author. If this can be thoroughly done, it ought to be done. But if this is to be done there is no time for unnecessary work. The book select-



ed as a primer must make Cæsar its distinct aim from the beginning. Hence the value of such a book as Jones's *First Latin Lessons* which from the beginning takes its sentences wholly from that author. But I have thought there is a better way, and that way would be through a genuinely inductive method based upon Cæsar alone. Such a method has the following advantages. It awakens and sustains the interest of the student; it supplies information when the need of it is felt and not before; it proceeds gradually from the known to the unknown, in accordance with educational maxims; its material is drawn from the actual text in connected order, thus being more interesting and making the student thoroughly familiar with the author he is studying; most important of all, it saves the student at least half a year and in many cases a full year of time, inasmuch as while acquiring his inflections he will at the same time have completely read the Helvetian War. These and other considerations compel me to give as my first suggestion the adoption of some introductory book using the inductive method and based on Cæsar. It is true that this method makes rather greater demands on the teacher than the old way. This, however, may be a positive advantage, and will certainly be no obstacle to earnest teachers. It is also true that the ideal book constructed on this plan has not yet appeared. Harper's is good, but it needs a more careful gathering up of the loose threads which otherwise I have found liable to get sadly tangled in the pupil's brain.

Next, and contrary to the usual custom and to the opinion of many eminent educators, I have long thought that the plan of teaching Latin composition from the beginning is a mistake. I have not time to go into this question as I should like, but the proper order has always seemed to me to be first the comparatively easy art of reading and then the far more difficult one of writing. I claim that the attempt to write Latin at this early stage, or rather to do English into Latin, is not only unnecessary and therefore contrary to the principle we have laid down, but positively harmful. The exercises are invariably distasteful to the young student and the success to the average pupil is very doubtful. The endeavor to construct idiomatic sentences before anything has been developed of Latin style and order, or anything felt of the genius of a Latin sentence, is useless as an exercise in Latin composition and a hindrance to future precision. To be at all correct the exercise degenerates largely into servile imitation, and there is considerable danger, despite the care of the

teacher, of acquiring a slovenly and objectionable style. I have found that by deferring all English into Latin to a later stage the pupil approaches the subject intelligently and with interest. The taste having been cultivated by the study of an actual classic the student instinctively writes both more easily and more correctly. My second suggestion, then, is that all English into Latin be deferred at least until after the elementary book is completed, or even until Cæsar is finished. I feel convinced that by thus deferring all translation into Latin the progress will subsequently be in a geometric ratio and both student and teacher will be saved much weariness. Latin composition, then, should find no place in any shape in the first two years of study. The same remark applies to Greek, only still more forcibly.

By these methods a pupil of from thirteen to fifteen years of age could, I feel sure, easily and thoroughly read four books of Cæsar and even begin his Cicero or Virgil within the first two years.

My last point has reference to the terrible chasm which most teachers feel exists between the elementary book and the formal reading of Cæsar or Xenophon. The inductive method does something to bridge the gap. But something more is needed. Various methods have been adopted with more or less success. In England Eutropius is frequently chosen to precede Cæsar and this author has several advantages. Sometimes a book like *Viri Romæ* is taken. Frequently graded selections on the plan of *Gradatim* are used for the first reader. Another plan is to precede Cæsar by a short course of manufactured Latin from modern authors or by modern stories. In Germany I believe Nepos is the author generally used. These various devices are a confession that something is needed before the young student plunges into the constructions of an author so confessedly difficult to a beginner as is Cæsar. I do not think any of these methods quite meet the case. The want of something different is apparent, but to supply it is not quite so easy.

## *THE MAKING OF PUPILS WELL INFORMED.*

BY G. J. SMITH, WASHINGTON, D. C., HIGH SCHOOL.

MOST people are not well informed on general topics, in politics, science, theology, or literature. Such is the almost universal testimony of well-read, intelligent people who talk much with their fellow creatures. Painfully narrow and vapid is that life in which the reading of solid books, talk on high and broad subjects, and real thought, have no part. The mind which feeds solely on the prosaics of daily human life and the petty gossips of a circle has surely but an innutritious fare. Stunting follows; weakness, loss of digestive power, and finally disinclination to food that is sweet, rich and various enough for a strong mind.

It is practical to take up general information work in school regularly or incidentally. It is easy to arouse an interest in such work among any set of boys and girls who have access to papers or magazines. Have not these minds the gift of reason, of "looking before and after"? True, such "extra" effort (if it is extra) may cost at first, until the habit is formed, some care, some ingenuity, some persistency; even on the teacher's part, perhaps, some special preparation. But is there no gain in this to the teacher?

How many of our scholars read the newspapers every day, that is, how many strive to keep in touch with the great world? How many who do read the newspapers know enough to select what is worth reading, to despise and reject what is trash? Is there no need of training in this direction?

I venture to give a few suggestions pertinent to this line of activity.

1. As a preliminary step a few suggestive inquiries on the teacher's part, a few chosen words as to the importance of being informed on current topics, should do all that is necessary to arouse interest. The familiar plan of having a part of the black board reserved for a "news bulletin" is excellent. Two members of the school may be a "gleaning committee" to summarize day by day the important news, it being decided what news is important by a collation of notes by these two.

2. Whether a bulletin board is kept or not, topics of current interest which are of real importance,—having evident application,

opening broad fields of thought, or involving questions of right and wrong — should be discussed by teacher and school. Exercises of this sort should come either every day or frequently enough to make sure that interest should never die out. Topics should be suggested by scholars and by teacher.

Whether the teacher should do more than insist upon a proper spirit in debate, or direct the course of the discussion, depends upon the nature of the subject. In this as in the rest of the details of such work the genius of the teacher must guide. If the subject be of a sort not readily understood, or if information on it be not generally accessible, the teacher becomes more prominent in the work. But as a rule his aim should be to arouse the activities of the boys and girls under his charge. He should insist on expression of *opinion*, lead them to *think*. “Is this right?” “Do you think this is true, or wise?” “Why was that done?” The great trouble with work of this sort is that it is seldom thorough enough to amount to much. It is better to master one question, in politics, for example, than to touch on a dozen topics in a cursory manner which makes no impression on the minds of the scholars and leads them to no real, questioning, systematic, consideration of the problem.

Recently in a school with whose workings I am familiar, the question of Speaker Reed’s rulings was taken up. The only introduction by the teacher was a few words on the general discussion excited by the Speaker’s action, especially in the quorum matter. It was pointed out that the question involved was not merely of constitutional ruling, or of political significance, but a question of principle. A non-partisan spirit was insisted upon. The school was urged to make preparation for an intelligent consideration of the subject, by making inquiries at home and elsewhere, and by reading whatever related to it.

Next day a boy stated fairly what had been done by Mr. Reed. The matter was illustrated by numbers, so that “counting a quorum” could be readily understood. Next in order came ideas as to the constitutional references to a quorum, and as to the true meaning of the word — a majority of members present, or of those present and voting? The matter was then reduced to a question of right and wrong. What *should* a quorum consist of? What rights has a minority and in what ways only should a minority make itself felt? Naturally the facts relating to Speaker Reed’s rulings on other points than this one in question were set forth and commented upon.



It seems evident that an exercise of this sort, conducted deliberately, covering perhaps a half dozen brief periods, involves in it much that is exceedingly valuable to a growing mind. It leads to individual thought, to strength of conviction, to a habit of weighing a question on its merits. The secondary effects which must follow after a time—the awakened intelligence and the brightened conversation—are certainly by no means to be despised. And for the teacher, is he stronger or is he more stupid for it?

I add as mere suggestion a few topics selected from a much completer classified list which I have made from my own magazine and newspaper reading. Of course while some of these topics may be made the basis of long and instructive discussion, others are only fit for explanation by the teacher. Reviews from time to time are valuable and bring out new points.

Omitting among other classes a great collection of topics on religion, I begin with topics—

1. SOCIOLOGICAL :

Protective tariffs.

Henry George and the land question. (The agricultural "crisis" in the United States.)

The great problem of poverty. (Anarchy; the wages problem; General Booth's new book "In Darkest England.")

Labor organization.

Sunday Laws.

Arbitration.

Government telegraph.

Exhaustion of arable lands in America.

"Nationalism" (Edward Bellamy.)

Coast defenses.

2. LITERARY :

Realism in fiction.

Who is Rudyard Kipling?

International copyright.

Improvement needed in the American press.

News about literary men.

3. POLITICAL :

Reed's rulings.

The Farmer's Alliance.

The Federal Election Bill.  
 State Sovereignty.  
 Should the suffrage be extended or limited ?  
 Corruption in politics. (The rum power; trusts and lobbyists; vote-buying; etc.)  
 The annexation of Canada.  
 The Behring Sea trouble.  
 The Australian ballot system.

4. FOREIGN :

The Irish question (Home-rule, etc.)  
 The French Republic, will it last ?  
 "Boulangism."  
 English and German relations. (The partition of Africa.)  
 The European situation.

5. CURRENT TOPICS :

The passion play.  
 Is Russia civilized ? ("E. B. Lanin," George Kennan.)  
 O. F. Adams on "the mannerless sex" (N. A. Review for September.)

6. PERSONAL :

Bismarck in retirement.  
 The young German Emperor.  
 Noted men recently dead (Browning, Manning, Newman, etc.)

7. SCIENTIFIC :

The Giffard gun.  
 Smokeless powder (effect in battles.)  
 Gas as the coming fuel.  
 Submarine boats (the Goubet.)  
 Aerial navigation.  
 The future of invention (Keeley and his moter, etc.)  
 Is Pasteurism a fraud ?  
 The germ theory of disease (Koch's cure for consumption.)  
 Recent discovery of "phagocytes" (blood discs which devour disease germs.)

*APPORTIONMENT OF LITERATURE FUND BY  
THE REGENTS OF THE UNIVERSITY, JAN. 1891.*

We give below a list of the schools of New York receiving income from the Literature Fund apportioned by the Regents, January, 1891. We have included this year some items not hitherto published by us but which we think will be of interest. In the right column will be found the number of pupils in each school holding the Regents' preliminary certificate, in the next column the number of classical diplomas granted in each school the past academic year, in the next column the number of academic diplomas, in the next the number of academic certificates. The numbers in front of each school refer only to the number of preliminary certificates.

The amount received on each preliminary certificate is \$3.70. Last year it was \$4.30, in 1889, \$5.18, in 1888, \$5.67. The whole amount divided is \$98,883.37 of which \$64,539.10 is distributed on preliminary certificates. The amount received for each academic certificate is \$5; for each academic diploma, \$10; and for each classical diploma, \$15. The number of scholars reported as having preliminary certificates and being in attendance thirteen weeks or more is 17,443. Last year it was 17,622; in 1889, 15,610; and in 1888, 14,558.

38	Adams Collegiate Institute.....	30	4	1	100
75	Addison Union School.....	17	9		66
45	Adelphi Academy, Brooklyn .....				91
183	Afton Union School.....	11	5		29
216	Akron Union School.....	5	4		22
103	Albany Academy.....				52
4	Albany High School.....	62	39	4	559
26	Albion Union School.....	8	2		130
282	Alexander Union School .....				6
12	Alfred University, Acad. Dept .....			1	181
258	A. M. Chesbrough Seminary.....				12
295	Amsterdam Academy.....				2
235	Angola Union School.....	1			17
148	Arcade Union School.....	6	5		38
294	Argyle Academy.....				3
133	Attica Union School.....	5			42
288	Auburn High School*.....				5
279	Ausable Forks Union School.....				7
200	Avon Union School.....	2	3		25
143	Bainbridge Union School.....	4	3		39
73	Baldwinsville Free Academy.....	17	6		67

\* Does not take the Regents' examination.

23	Batavia Union School.....	17	21	4	138
290	Bath-on-the-Hudson Union School.....				4
267	Belmont Union School.....	1			10
7	Binghamton High School.....				232
123	Boonville Union School.....	6	2		45
200	Brasher and Stockholm Union School.....	3			25
282	Bridge Hampton Institute.....				6
189	Brookfield Union School.....	5	1		28
15	Brooklyn Polytechnic Institute.....				157
2	Buffalo High School.....	139	85	11	713
212	Cambridge Union School.....	4			23
106	Camden Union School.....	12	1		51
143	Canajoharie Union School.....	9	3		39
123	Canandaigua Academy.....	13	8	1	45
30	Canandaigua Union School.....	23	7	2	122
200	Canaseraga Union School.....	3	3		25
148	Canastota Union School.....	7	3		38
192	Candor Free Academy.....	4	4		27
59	Canisteo Academy.....	12	8		73
99	Canton Union School.....	13			56
164	Carthage Union School.....	2	1		34
210	Cary Coll. Sem., Oakfield.....	1	1		24
200	Castile Union School.....	4	8		25
100	Catskill Free Academy.....	11	8		55
177	Cattaraugus Union School.....	5			32
24	Cazenovia Seminary.....	14	7		135
189	Central Square Union School.....	4	8		28
83	Chamberlain Institute, Randolph.....	4	1		62
295	Champlain Union School.....				2
238	Chateaugay Union School.....	5			16
143	Chatham Union School.....	8	4		39
263	Chester Union School.....	1			11
177	Cincinnati Academy.....	3	1		32
143	Claverack Academy.....	8			39
233	Clayton Union School.....	3			18
272	Clinton Grammar School.....	1			9
164	Clinton Lib. Institute, Ft. Plain.....	1	1		34
50	Clyde High School.....	18	19		85
75	Cobleskill Union School.....	15	7		66
238	Colgate Academy, Hamilton*.....				16
70	Cook Academy, Havana.....	5	5		69
46	Cooperstown Union School.....	14	9		89
192	Copenhagen Union School.....	4	1		27
43	Corning Free Academy.....	6	5		92
267	Cocksackie Union School.....	1			10
238	Crown Point Union School.....	1			16
119	Cuba Union School.....	2		1	46
78	Dansville Union School.....	13	4		65
279	DeLancey School, Geneva.....	2			7
62	Delaware Academy, Delhi.....	11	20	1	71
70	Delaware Lit. Inst., Franklin.....	13	12	1	69
127	Deposit Union School.....	5			44
200	DeRuyter Union School.....	5	1		25
192	Dryden Union School.....	6	4		27
65	Dundee Preparatory School.....	19	11		70
86	Dunkirk Union School.....	6	4		61
117	East Aurora Union School.....	11	8		48

\* Does not take the Regents' examination.



183	East Springfield Academy.....	9	4		29
221	East Syracuse Union School.....	4	6		21
57	Egberts High School, Cohoes.....	27			78
272	Elizabethtown Union School.....		1		9
91	Ellenville Union School.....	16	9		58
183	Ellington Union School.....	6	8		29
6	Elmira Free Academy.....	39	24		236
276	Evans Academy, Peterborough.....	1			8
86	Fairfield Seminary.....	9	9	2	61
43	Fairport Union School.....	15	8	3	92
200	Fayetteville Union School.....	6			25
40	Flushing High School.....	25	14	2	95
221	Fonda Union School.....	6			21
91	Forestville Free Academy.....	15	8		58
252	Fort Covington Free Academy.....	3			13
216	Fort Edward Collegiate Institute.....				22
252	Fort Edward Union School.....	3			13
38	Franklin Academy, Malone.....	21	14		100
212	Franklin Acad. & U. S. Prattsburgh.....	2	5		23
263	Friendship Academy.....	1			11
29	Fulton Union School.....	10	13		123
200	Genesee Valley Sem., Belfast.....	3	2		25
91	Genesee Wesleyan Seminary, Lima.....	1	1		58
65	Geneva Classical and Union School.....	11	3		70
197	Gilbertsville Academy.....	2	3		26
119	Glens Falls Academy.....	8	12		46
141	Glens Falls Union School.....	13	4		40
55	Gloversville Union School.....	9			79
263	Goshen Union School.....	3			11
50	Gouverneur Seminary.....	23	4		85
127	Gowanda Union School.....	5	3		44
136	Greene Union School.....	10	5		41
247	Greenport Union School.....	1			14
267	Greenville Academy.....				10
88	Greenwich Union School.....	9	4		60
37	Griffith Institute & U. S., Springville.....	20	11	4	101
216	Groton Union School.....	7	6		22
106	Hamburgh Union School.....	6	4		51
172	Hammondsport High School.....	11	8		33
200	Hancock Union School.....	9	3	1	25
148	Hartwick Seminary.....	11	7		38
21	Haverling Union School, Bath.....	28	10	1	141
114	Herkimer Union School.....	16	5	1	49
247	Hogansburgh Academy.....				14
172	Holland Patent Union School.....	10	2		33
244	Holley Union School.....				15
148	Homer Academy and Union School.....	2	4		38
83	Hoosick Falls Union School.....	3			62
14	Hornell Free Academy, Hornellsville.....	26	18		158
177	Horseheads Union School.....	6	1		32
181	Houghton Seminary, Clinton.....	5	4		30
70	Hudson High School.....	22	8		69
95	Huntington Union School.....	3	3		57
41	Ilion Union School.....	15	15		94
228	Ingham University, Acad. Dept.....		2		19
5	Ithaca High School.....	49	30	1	262
157	Ives Seminary, Antwerp.....	6	8	2	37
11	Jamestown High School.....	25	26		186
36	Johnstown High School.....	10	8	1	103

123	Jordan Free Academy.....	5	4	45
216	Keeseville Union School.....	1		22
288	Kingsboro' Union School.....	1		5
17	Kingston Free Academy.....	13	11	3 151
65	Lansingburgh Academy.....	7	5	70
197	Leavenworth Inst., Wolcott.....	3		26
235	Leonardsville Union School.....	4		17
110	LeRoy Academic Institute.....	12		50
238	Limestone Union School.....			16
282	Lisle Union School.....			6
59	Little Falls Union School.....	9	9	73
258	Liverpool Union School.....			12
9	Lockport Union School.....	20	7	1 206
172	Lowville Academy.....	5	5	2 33
65	Lyons Union School.....	9	3	2 70
127	Macedon Academy.....	6	6	44
244	McGrawville Union School.....			15
258	Madison Union School.....	4		12
110	Manlius Union School.....	9	2	50
238	Marathon Union School.....	5	4	16
89	Marion Collegiate Institute.....	13	7	1 59
295	Marshall Seminary of Easton.....			2
212	Massena Union School.....	10		23
228	Mayville Union School.....	1		19
267	Mechanicville Union School.....	2		10
33	Medina Free Academy.....	16	17	111
95	Mexico Academy.....	10	2	4 57
148	Middleburgh Union School.....	2		38
247	Middlebury Academy, Wyoming.....	3	3	1 14
198	Mohawk Union School.....	1	4	26
247	Montgomery Union School.....		1	14
100	Moravia Union School.....	3	3	55
117	Morris Union School.....	12	14	48
233	Mount Morris Union School.....	9	3	18
272	Mt. St. Mary's Academy, Newburgh.....	1		9
119	Munro Collegiate Institute, Elbridge.....	7	4	46
27	Mynderse Academy, Seneca Falls.....	32	20	127
81	Naples Union School.....	9	10	64
54	Newark Union School and Academy.....	21	12	81
164	Newark Valley Union School.....	5		34
189	New Berlin Union School.....	9		28
83	New Rochelle Union School.....			62
164	Niagara Falls Union School.....	13	5	34
258	Nichols Union School.....			12
267	North Brookfield Union School.....	1		10
298	North Tarrytown Union School.....			1
183	North Tonawanda Union School.....	9	6	29
32	Norwich Union School.....	22	3	3 116
143	Norwood Union School.....	6	5	39
160	Nunda Union School.....	2		35
13	Ogdensburg Free Academy.....	16	6	3 164
58	Olean Union School.....	16	9	77
62	Oneida Union School.....	14	5	5 71
95	Oneonta Union School.....	9	9	1 57
177	Onondaga Free Academy.....	4		32
31	Oswego High School.....	6	1	119
221	Ovid Union School.....		3	21
16	Owego Free Academy.....	20	7	8 153
46	Oxford Academy.....	19	13	89

235	Painted Post Union School.....	4	1	17
279	Palatine Bridge Union School.....	2		7
53	Palmyra Classical Union School.....	15	12	82
228	Parish Union School.....	5	5	19
160	Parker Union School, Clarence.....	9	2	35
298	Peekskill Academy.....			1
227	Peekskill Union School.....	4		20
25	Penn Yan Academy.....	14	5	4 132
65	Perry Union School.....	16	4	70
110	Phelps Union and Classical School.....	3	10	50
114	Phœnix Union School.....	1	4	49
103	Pike Seminary.....	11	5	52
46	Plattsburgh High School.....	6	1	89
221	Pompey Academy.....	1		21
110	Port Byron Free School and Academy.....	16	5	50
160	Port Henry Union School.....	2		35
19	Port Jervis Union School.....	23	10	149
221	Portville Union School.....	3	1	21
35	Poughkeepsie High School.....	24	2	109
136	Pulaski Academy.....	7	2	1 41
252	Putnam Union School, Cambridge.....	5		13
103	Red Creek Union Seminary.....	13		52
272	Rhinebeck Union School.....	2		9
172	Richfield Springs High School.....	3	1	33
3	Rochester Free Academy.....	23	15	11 618
282	Rogersville Union Sem., S. Dansville.....			6
22	Rome Free Academy.....	23	15	4 139
221	Rushford Union School.....	3	1	21
210	Rushville Union School.....	2		24
276	Sag Harbor Union School.....	1		8
133	St. John's Cath. Acad., Syracuse.....	12		42
106	St. Johnsville Union School.....	22	13	51
133	St. Mary's Cath. Inst., Amsterdam.....	6	1	42
49	Salamanca Union School.....	12	13	86
159	Sandy Creek Union School.....	12	9	36
62	Sandy Hill Union School.....	18	8	71
27	Saratoga Springs Union School.....	19	11	127
216	Sauquoit Academy.....	6	1	22
17	Schenectady Union Classical Inst.....			151
148	Schenevus Union School.....	7	7	38
183	Schoharie Union School.....	4	4	29
164	Schuylerville Union School.....	11	1	34
258	Seymour Smith Acad., Pine Plains.....	4	2	12
200	Sherburn Union School.....	4		25
127	Sherman Academy, Moriah.....	3		44
131	Sherman Union School.....	11	7	43
164	Sidney Union School.....	7	3	34
183	Silver Creek Union School.....	8	6	29
181	Sinclairville Union School.....	7	7	30
61	Skaneateles Union School.....	13	6	4 72
263	Smithville U. S., Smithville Flats.....			11
55	Sodus Academy.....	8		79
106	Spencer Union School.....	14	7	51
78	Stamford Seminary and U. S.....	17	15	1 65
95	Starkey Seminary, Eddytown.....	11	6	57
192	Staten Island Academy, Stapleton.....	3	1	27
141	Stillwater Union School.....	5		40
252	Suspension Bridge High School.....	1		13
1	Syracuse High School.....			719

89	Ten Broeck Free Acad., Franklinville.....	6	6		59
252	Ticonderga Union School.....	2			13
290	Tonawanda Union School.....				4
244	Troy Academy.....				15
148	Troy Female Seminary.....				38
10	Troy High School.....	14	11	1	191
157	Trumansburgh Union School.....	9	2		37
75	Ulster Free Academy, Rondout.....	15	15		66
164	Unadilla Academy.....	4	2	1	34
164	Union Academy of Belleville.....	3		1	34
252	Union Springs Union School.....	4	1		13
8	Utica Free Academy.....	62	13	2	228
238	Valatie Union School.....	2	1		16
282	Vernon Union School.....				6
41	Wallkill Free Academy, Middletown.....	17	4	2	94
52	Walton Union School.....	14	3	1	84
282	Walworth Academy.....	2			6
290	Warrensburgh High School.....	1			4
78	Warsaw Union School.....	15	9	5	65
136	Warwick Institute.....	6	8		41
212	Washington Academy, Salem.....	2	4		23
102	Waterford Union School.....	14	9		54
131	Waterloo Union School.....	10	3	1	43
20	Watertown High School.....	10		3	148
91	Waterville Union School.....	6	4	3	58
136	Watkins Academic Union School.....	4	2		41
34	Waverly High School.....	22	15		110
148	Webster Union School.....	3	2		38
73	Weedspport Union School.....	24	14		67
114	Wellsville Union School.....	13	8		49
247	Westchester Union School No. 1.....				14
290	Westchester Union School No. 3.....				4
81	Westfield Academy and Union School.....	16	8		64
276	West Hebron Union School.....	1			8
192	Westport Union School.....	2	3		27
123	West Winfield Union School.....	11	4		45
148	Whitehall Union School.....	9	4		38
200	Whitney's Point Union School.....	1	2		25
119	Wilson Academy, Angelica.....	8	3	1	46
228	Wilson Union School.....	1	1		19
172	Windsor Union School.....	4	1		33
228	Woodhull Union School.....	5	1		19
160	Worcester Union School.....	5	6		35
136	Yates Union School, Chittenango.....	9	2		41
		2555	1351	125	17443



## *THE MASSACHUSETTS STATE TEACHERS' ASSOCIATION.*

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THE programme at the Worcester meeting of the Massachusetts Teachers' Association was the strongest we ever saw. Three such college presidents as Eliot, Hall and Gates do not often appear on a single platform in a single day with formal preparation. The management, following the usual custom, had gone outside the state, and been especially fortunate in securing Mr. Draper of New York and Mr. Howland of Chicago. There was, too, an abundant array of home talent, some of which, however, presented a pitiful product in the discussions.

One general criticism ought to be made in the strongest terms and will be heeded if the management desires to do the best thing possible for the teachers and not simply to present an astonishing array of names; the programme was so full that no adequate opportunity could be given for discussion, and if any speaker exceeded his proper limit, as did Dr. Hall, it disarranged the entire proceedings. Another criticism might be directed at those who were appointed to discuss the more formal papers. We do not believe the best results in an educational meeting can be secured if the participants in a discussion write out their parts beforehand and simply read them. It takes the life and the snap all out of the thing. It is not properly a discussion at all. Both Mr. Thurber and President Eliot suffered from inadequate discussion at the Worcester meeting. Mr. Thurber had carefully prepared a paper that he could not hope would be popular, but which ought at least to have provoked discussion. But Mr. Marble, who is usually one of the best opponents and admirably fitted to bring out the rival sides of a question, came in late, failed to hear most of the paper he was to discuss, and missed its point entirely. Then came Miss Gaylord with a written essay, and the hour was gone and the opportunity lost. Out in the hall a few minutes later we heard fierce criticism of Mr. Thurber's paper, but in the room where the discussion should have been held no one found courage to utter an opinion on it. Possibly if more time had been given volunteers would have appeared.

The same thing happened the next hour in the grammar school section. President Eliot, who always has something definite to say and who, though courteous and dignified, does not hesitate to say what he thinks, arraigned the work of the grammar school. Superintendent Seaver followed with a written paper of general praise, somewhat in the we-point-with-pride style held usually in high favor by supporters of the accepted order of things, and the so-called discussion ended. Very different were the fierce attacks heard on every side five minutes later when President Eliot's modest strictures were characterized as shameful and insulting and he himself was accused of insincerity, untruthfulness and various other characteristics not ordinarily possessed by a college president. Now we are not at this time sustaining President Eliot's position, in fact we are sure some of his points could be easily and successfully turned against him; we are simply calling attention to the fact that it would have added greatly to the interest of the occasion if Mr. Seaver had said something which bore on the question in hand, or if an opportunity could have been given and accepted for a full, fair and free discussion of the subject.

There was a general feeling that one need n't hurry about getting to the meeting, but that it was important to be on hand before President Stanley Hall began to discuss "Recent Changes in the Primary and Grammar Schools of Europe." As in all Mr. Hall's work there, was here an entire absence of literary form, but his manner was so simple and his information so extended that one hardly felt like criticising. His talk was interesting in the highest degree, and as long as it was interesting. One could not but notice the grim irony of the little abstract handed round just after Dr. Hall closed which said "these topics were presented very briefly and concisely." There are two little books recently published in France which contain much of the matter presented by Mr. Hall and which we recommend to those of our readers who were not so fortunate as to be able to hear his paper. The titles are "*La Nouvelle Législation de L'Enseignement Primaire*, exposé et commentaire suivis du texte des lois, décrets, arrêtés, circulaires et programmes (y compris la loi du 19 juillet 1889) par Pierre Carrive, juge au tribunal d'Etamps, Paris: Hachette & cie," and "*Manuel du Certificat d'Aptitude Pédagogique* par Eugène Brouard et Charles Defodon, Paris: Hachette & cie." Mr. Hall had little to say of Europe outside of France.

Mr. Dunton's paper we were unable to hear. The hour of its delivery was spent in enjoying one of those inimitable talks on educational topics which Mr. Russell of the Worcester Normal School can sometimes be prevailed upon to give to a small audience.

Of all the men who appeared before the Association we think none left so good an impression on so many of those present as did Superintendent Draper. Possibly in this respect he divides the honors with another New York man, the newly elected President Gates of Amherst. The tone of Mr. Draper's paper at Worcester was pleasantly aggressive. Its criticism of Massachusetts was open and vigorous, betraying no rancour or jealousy. It cannot be denied that New York in these latter days has been living up to her opportunities as Massachusetts in the same time has emphatically failed to do. We think the result in each case has been largely due to the nominal head of education in each state. A college president, well known all over this country, himself a native of Massachusetts and familiar with her educational life, said to us last summer, "Massachusetts will make no advance educationally so long as she retains the present Secretary of the State Board." It is a fact to which Massachusetts men least of all should be willing to shut their eyes, that the state is not maintaining her rank educationally, in fact for several years has not been maintaining it.

President Eliot's presentation of the "Actual Work Accomplished in an Average Massachusetts Grammar School" evoked the fiercest storm of denunciation that we have witnessed in some time. From our exchanges we see that it is still reverberating over the country. We hope it may serve to clear the air. We cannot understand the bitterness with which this paper was discussed after the meeting. The speaker's method of testing the grammar school work by having it done by high school graduates and noting the time it takes does not commend itself to us. It shows a degree of interest and a willingness to investigate which are gratifying. But it presents too good a chance for a *tu quoque* argument on the part of the grammar school men. One of them offered just after the close of the meeting (the offer would have been much more forceful had it been made in open discussion) to do the entire work of the four years in mathematics at Harvard in less than two weeks. We believe there are plenty of men four years out of college who could make as good a showing on the work of the Harvard course as did President Eliot's high school graduates on the work of the grammar

school course, and we should claim that this indicated very little in either case.

But whatever may be said of this particular method of investigation we believe it is true that we have a right to expect better results from grammar school work than are now obtained. President Eliot sees that the grammar school stands hopelessly in the way of his getting students to enter college as young as he wants them, and that the length of the sub-collegiate course indirectly prevents some from entering college at all. With this particular phase of the subject we are not specially concerned. What we protest against is using six years of a child's time in such a way as neither to give him very much actual useful attainment in the way of knowledge, nor to stimulate his faculties and rouse his curiosity. In entering this protest we distinctly disclaim any reflection on the faithfulness of grammar school teachers. We believe their fault is rather in undue attention to their work. They get so interested in the process that they forget the end. Their environment and the routine of their work is such as to make this almost unavoidable. The subjects they teach get out of proper perspective, and on account of this exaggeration the pupils suffer. We have seen a young graduate of a high school go into a teacher's examination not quite sure whether to multiply or divide when the sum remitted to the agent included his commission. In the first year of her teaching the importance of this matter gradually grows on her; it becomes more luminous and important the second year, and so on, until a child seems in hopeless ignorance who does not know more about it than the teacher did when she began to teach. The same thing is true of grammar and geography. One has only to go into a grammar school recitation in many cases to find out how little he knows about things which are held up before mere children as of the utmost importance. If all this knowledge were retained, or if there were any possible chance of using much of it in after life, there might be some excuse. But it may as well be admitted first as last that there is time in school for one to learn only a small part of what he afterwards needs to know and to use. The habit of observation, generalization, and reasoning, the power to think and to express one's thoughts, the use of the faculties of moral judgment and just discrimination, these are things which every man needs at every hour of his waking life. How far the minute memorizing in geography, the subtleties of grammatical studies, or the applications of percentage



contribute to these ends, is a subject worthy of the attention of the college president or the humblest pedagogue, and no considerations of interest or of prejudice ought to stand in the way of careful investigation, generous extension or rigid curtailment of our present courses and methods.

President Eliot offered three practical suggestions; first, an increase in the number of school hours and school weeks; second, an improvement in ventilation and hygienic conditions; third, the introduction of physical exercises. As a natural corollary of the first would come a lessening of the rigid tension that characterizes the best taught and the best supervised of our schools. More hours of personal contact with good teachers could not fail to be of great benefit to the average child. It would give time for the introduction of many things now felt to be desirable by most teachers but for which they can find little time amid the strenuous exertions now exacted by the imperative work of the course. Few can have failed to note that with the development of our public schools there is a continual tendency to thrust upon the teachers the duties that were once thought to be specially the function of parents. The training in morals and manners which should be the first care of the parent is now demanded of the teacher. The mother who cannot make her boy "mind" at home appeals to his teacher. The latter is expected to influence the child to love good books and good company, to cultivate in him habits of personal neatness, to arouse sentiments of humanity, charity, kindness, affection, in fact to do all that the ideal parent could do, and to do it while carrying out an elaborate course of study which would tax to the utmost the highest powers of an able instructor, all in the few hours allotted to school work with all the possibilities of interruption and diversion which only a practical teacher can understand. The influence of the street and of the hours spent out of school often directly antagonizes the work of the teacher. However much all these things may be deplored they exist and must be met. They can be combated successfully only by extending the time spent in school, lessening the tension of the present strain, and letting the personal influence of good teachers do what parents neglect. The force of teachers would have to be largely increased, for the value of the personal element in the teacher could be fully felt only when she was at her best and in possession of all her vitality. In such circumstances the real strain on the teacher per hour would be lessened and the gain in results would

more than repay the increased cost of the schools. Proper ventilation and the relief of physical exercises are so axiomatically beneficial as to need no plea in their behalf.

Mr. Eliot's strictures on the excessive attention given to memory studies lose part of their force when it is remembered that the schools he investigated were specially unfortunate in that respect. Even in the city to which he referred it would probably be found that in actual practice the course was relieved of some of its worst features. The abuse of memory work in our own observation seems rather to lie in its application to the wrong subjects rather than to its excessive use where it may rightly be applied, to its use in studies that are really thought or observation studies rather than the too great introduction of memory studies. It is an undeniable fact that in our public schools the memory is not especially cultivated. If any one doubts it let him ask some grammar school graduate to repeat an entire paragraph from some masterpiece of prose or even some complete short poem. Such things are proper subjects for memorizing. A paragraph from Webster, or Burke, or Bacon, has a value as a lesson in expression if committed to memory. So has a bit of Shakespeare or Milton. But the application of memory work to mathematics and science stands directly in the way both of acquirement and true training.

Grading by proficiency was the final suggestion of the speaker. Dreadfully undemocratic certainly it is, but none the less wholly in the best interests of all concerned. The popular prejudice against it rests upon a fallacy that all men are equal, a fallacy daily disproved before our eyes, but nevertheless placed, in defiance of truth, at the very foundation of many of our institutions. For those that believe it argument and illustration are of no avail. But there is a large class who admit that all are not equal but wish all to receive equal rights. It ought not to be difficult for these to see that the dull boy will profit as much in proportion to his capacity by individual treatment as will the bright. Individualism in education is really what Mr. Eliot advocated. We do not believe that in any class or in any school a bright boy should receive more of a teacher's time or help than should a dull one. Each has a right to an equal share and no more, but each has also the right to go at the pace for which nature has fitted him. We know there is a certain set of so-called educators who see something invidious in promoting one member of a class because he is ready for a higher grade. It seems

to them like saying "you are brighter and quicker than the rest, therefore you are to have a reward which the others must do without." To them it is like saying to the dull ones "You are stupid and slow and must be punished for it." It is not easy to make such would-be educators understand that what is best for each individual is that he should recognize his limitations and try to be and to do the best possible within those limitations. Promotion in school should not be thought of as a reward. It should be simply putting a pupil where he can work best, and that is done as fully when the capable ones go fast as when the incapable go slow.

On the whole President Eliot's remarks seemed to us entirely temperate, modest and suggestive, worthy of careful weighing and able to stand or fall on their merits. He claimed to speak only as an intelligent outsider and such speech may more safely be met with cordial welcome than with instinctive condemnation and abuse. It is not the outsiders who assure teachers their work is the noblest, their lives the most devoted, and their characters the most exalted upon earth, that render a real service. Criticism the most violent and prejudiced is less demoralizing than vapid praise. The indiscriminate flatterer is not the safest friend. We improve only when our shortcomings are pointed out to us. Mr. Eliot's manner and spirit seemed all that could be desired. If his matter was amiss it should have been set right then and there. There were grammar school men enough present to have done it, and the head of the Boston schools was the next speaker.

President Gates's address in the evening we heard warmly praised, and Mr. Howland of Chicago on Saturday morning read a paper which was said to be of genuine value. Much to our regret circumstances beyond our control prevented us from hearing either.

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### GRAMMAR EXTRAORDINARY.

*To the Editor of THE ACADEMY:—*

To the query whether in the sentence, "the great watch stars shut up their holy eyes," *shut up* is to be parsed as a verb, an educational journal of wide circulation and great influence replies as fol-

lows:—“Dispose of *up* by saying that it is a superfluous word, adding nothing to the meaning or beauty of the sentence. Words should be classified according to their use in the sentence, and when a word is utterly useless, it cannot of course be classified on this principle. ‘Shut up,’ in this connection, means no more than *shut*. Redundancies of this kind are common in speech, and are not infrequently seen in print. The ability to recognize, to criticize, and to avoid these and kindred inelegancies should be sedulously cultivated in language work. Make your ‘parsing’ help in this direction.”

One hardly knows whether this advice was seriously intended. It hardly seems like an attempt at humor; for it is incredible that an educator should put off an honest inquirer with a joke. Is this really grammar-school grammar?

A HIGH SCHOOL TEACHER.

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### BOOKS RECEIVED.

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*Short studies of Shakespeare's plots*, by Cyril Ransome, M. A. London, Macmillan & Co. 1890.

OF these *studies* Professor Ransome says in his preface: “Their design is to be suggestive rather than exhaustive, and to call attention to a method of teaching Shakespeare somewhat different from that which is now employed in colleges and schools. That method, which treats the plays of Shakespeare more as convenient collections of hard words and unusual idioms than as masterpieces of literature, seems to me to be in many respects extremely unsatisfactory. It is repellent rather than instructive to the student, and it teaches him from the very outset to pursue his studies by a wrong road. Under its influence, the play as a whole tends to be neglected, words are exalted to the exclusion of thoughts, and study is far too much on the lines adopted by the young lady who is said ‘to have fastened down the text with a piece of elastic in order that it might not interfere with her learning the notes.’”

“This method has been adopted partly because the teaching of literature in schools is for the most part in the hands of men who have been accustomed to study Roman and Greek authors from the philological rather than from the literary standpoint, and partly because of the manner in which modern teaching has been regu-



lated in accordance with the requirements of examinations. Schoolmasters demand that questions should be set on points which are generally taught, and examiners wish to elicit answers which are capable of being reduced to an arithmetical standard—in other words, which are easy to mark. \* \* \* \* On the other hand, if the teacher tries to rise above mere word teaching, he tends to rush into the other extreme, and to cram his pupils with phrases culled from the works of Coleridge, or Goethe, or Dowden, which they can only imperfectly understand, and which they reproduce like parrots in answer to any manner of examination question.”

We have preferred to let Professor Ransome speak somewhat at large for himself, because he expresses precisely the opinion of THE ACADEMY as to the current method of teaching English literature, and points out the direction in which reform in this teaching is plainly destined to be effected. At present Shakespeare is read in heavily annotated editions which force upon the reader's attention undesired suggestions and needless information to an extent that renders unity of impression impossible. The multifarious notes appended to any of the texts most in vogue, unless neglected by the learner, dissipate the interest which the plays are fitted to awaken and spoil the simple and natural relation to great works of literature into which it should be the teacher's first aim to try to bring his pupils.

Professor Ransome's book is made up of chapters of about forty pages each on eight plays, viz., Hamlet, Julius Cæsar, Macbeth, King Lear, Richard II, Othello, Coriolanus, The Tempest. These chapters are very readable, interesting elucidations of the plots of the plays. They are altogether simple and unlearned, and do not touch recondite topics or invite the young student into the mysteries of Shakespearian erudition. Their purpose is to keep awake the perception of development in the plots, to hint relations of characters and events that might elude the ordinary reader, and to reveal something of the dramatic skill that succeeds so wonderfully in producing the masterpieces of literary art.

Professor Ransome has added a notable book to the apparatus of the English teacher.

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some writer of reputation on a theme of American history. The idea is a good one. The great hindrance to the adoption of good methods in literature and history is the difficulty of supplying classes with considerable numbers of copies of whatever books or chapters are at any moment needed for the subject in hand. It is tantalizing to an enthusiastic teacher to have only one copy of his Parkman, his Irving, his Parton. His one copy suggests the possibilities that might be realized if he had copies enough to go round his class. The attention of enterprising publishers may well turn itself to the reproduction, in very cheap form, of such useful books of reference as teachers of history need in their efforts to practise the *seminary* method. To ascertain what books or chapters the schools would find most immediately available, the publishers should consult such teachers as have been longest practising this method. The great essential in the seminary method is easy access to books that are authorities, — not to text-books..

The "Classic Readings" at present under review can hardly be said to contemplate high school classes in history, and ought not to be recommended to such classes. These readings are apparently destined for very young pupils, taught by very young teachers. We infer thus much from the fact that foot-notes are given in abundance, merely telling what the dictionaries tell better, and that questions are appended to the chapters, as if the lowest and most rudimentary form of lesson-giving and question-asking were had in mind by the editor. If the child needs such helps as are here offered him, why, we would ask, is he not reading easier books? And if teachers thus need to have their questions asked for them, why are they teaching at all? But perhaps this matter belongs to the mystery of primary education.

For high school purposes what is needed and longed for is simple republication of the right books. If these cannot be furnished without all apparatus of notes, it will be better to wait and accumulate the working libraries slowly, as is now being done.

*Petites Causeries*, suivies de Devoirs et Traductions pour les Classes, par Lambert Sauveur. Docteur ès lettres et en Droit. New York: F. W. Christern. Boston: Carl Schoenhof.

*Rudimentary Economics for Schools and Colleges*. By George M. Steele, LL. D., Principal of Wesleyan Academy, Wilbraham, Mass., and member of the American Economic Association. Boston and New York: Leach, Shewell & Sanborn.

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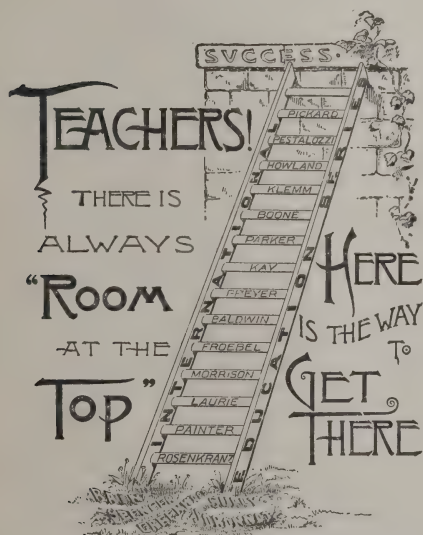
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